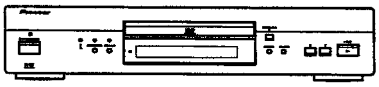
Pioneer sound.vision.soul

Service Manual


DV-757Ai

ORDER NO.
RRV2668

DVD PLAYER

DV-757Ai
DV-S755Ai

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Regional restriction codes (Region No.)	Remarks
DV-757Ai	WYXJ	AC220-240V	2	
DV-S755Ai	RLXJ/NC	AC110-127V/220-240V	3	

For details, refer to "Important symbols for good services".

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T-ZZE SEPT. 2002

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trainedto properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

LASER DIODE CHARACTERISTICS

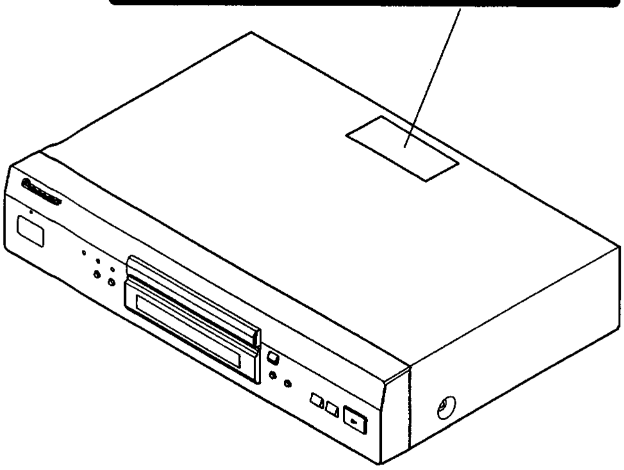
FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 780 nm

LABEL CHECK

Location: Printed on the Rear Panel

CLASS 1
LASER PRODUCT

CAUTION : VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENNABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN!
ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING : SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
VAROI : AVATTAESSA ALTISTUT NÄKYVÄ JA NÄKYMÄTTÖMÄLLE LASERSATEIL YLLE. ÄLÄ KATSO SÄTEESEN.
CUIDADO : RADIACIÓN LÁSER VISIBLE E INVISIBLE AL ESTAR ABIERTO. EVITAR EXPOSICIÓN AL RAYO.
VRW1872



Additional Laser Caution

1. Loading-status detection switch (S101 on the LOAB assy) are detected by the microprocessor (IC601 in the DVDM assy).
   - To permit the laser diode to oscillate, it is required to set the loading-status detection switch for the clamp position (the center terminal of S101 is shorted to +3V).
   When the voltage of IC101-pin 20 is +3V, IC601 (microprocessor) -pin 83 is +3V and IC601-pin 84 is +3V, 650nm laser diode for DVD oscillates in the DVDM Assy.
   When the voltage of IC101-pin 20 is +3V, IC601 (microprocessor) -pin 83 is 0V (GND) and IC601-pin 84 is +3V, 780nm laser diode for CD oscillates in the DVDM Assy.
   In the test mode * , the laser diode oscillates when microprocessor detects a PLAY signal, or when the PLAY key is pressed (S104 ON in the FLKY assy), with the above requirements satisfied.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

* : See page 70.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

■ DV-757Ai/WYXJ

General

System .... DVD Player
Power requirements ..... AC 220-240 V, 50/60 Hz
Power consumption .... 18 W
Power consumption (standby) .... 0.4 W
Weight .... 4.3 kg
Dimensions .... 420 (W) x 95 (H) x 279 (D) mm
Operating temperature .... +5°C to +35°C
Operating humidity .... 5% to 85% (no condensation)

Component Video output (Y, PB, PR)

Output level .... Y: 1.0 Vp-p (75 Ω)
PB, PR: 0.7 Vp-p (75 Ω)
Jacks .... RCA jacks

S-Video output

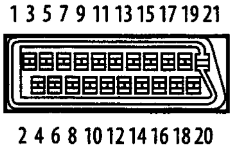
Y (luminance) - Output level .... 1 Vp-p (75 Ω)
C (color) - Output level .... 286 mVp-p (75 Ω)
Jack .... S-Video jack

Video output

Output level .... 1 Vp-p (75 Ω)
Jack .... RCA jack

AV connector output

AV Connector (21-pin connector assignment)
AV connector output .... 21-pin connector
This connector provides the video and audio signals for connection to a compatible colour TV or monitor.



PIN no.
1 .... Audio 2/R out
3 .... Audio 1/L out
4 .... GND
7 .... B out
8 .... Status
11 .... G out
15 .... R or C out
17 .... GND
19 .... Video out or Y out
21 .... GND

Audio output (1 stereo pair)

Output level .... During audio output
200 mVrms (1 kHz, –20 dB)
Number of channels 2
Jacks .... RCA jack

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level .... During audio output
200 mVrms (1 kHz, –20 dB)
Number of channels 6
Jacks .... RCA jack

Audio characteristics

Frequency response
.... 4 Hz to 44 kHz(DVD fs: 96 kHz)
.... 4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio .... 118 dB
Dynamic range .... 108 dB
Total harmonic distortion .... 0.0009 %
Wow and flutter .... Limit of measurement
(0.001% W. PEAK) or lower

Digital output

Optical digital output .... Optical digital jack
Coaxial digital output .... RCA jack

Other terminals

Control in .... Minijack (3.5 ø)
Control out .... Minijack (3.5 ø)

Accessories

Stereo audio cable 1
Video cable 1
4-pin S400 i.LINK cable 1
Power cable 1
Remote control 1
AA/R6P dry cell batteries 2
Operating Instructions 1
Warranty card 1

Note

- The specifications and design of this product are subject to change without notice, due to improvement.

• Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.
• "DTS" is a registered trademark of Digital Theater Systems, Inc.
• TruSurround and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

■ DV-S755Ai/RLXJ/NC

General

System	DVD Player
Power requirements	
DV-S755Ai	AC 110-127/220-240 V, 50/60 Hz
Power consumption	
DV-S755Ai	16 W
Power consumption (standby)	0.4 W
Weight	
DV-S755Ai	4.2 kg (9lb 4oz)
Dimensions	
DV-S755Ai	420 (W) x 95 (H) x 279 (D) mm (16 3/4 (W) x 3 3/4 (H) x 11 1/8 (D) in.)
Operating temperature	+5°C to +35°C (+36°F to +96°F)
Operating humidity	5% to 85% (no condensation)

Component Video output (Y, P_B, P_R)

Output level	Y: 1.0 Vp-p (75 Ω) P_B, P_R: 0.7 Vp-p (75 Ω)
Jacks	RCA jacks

D1/D2 Video Output (DV-S755Ai only)

Output level	Y: 1.0 Vp-p (75 Ω) P_B, P_R: 0.7 Vp-p (75 Ω)
Jacks	D video terminal

S-Video output

Y (luminance) - Output level	1 Vp-p (75 Ω)
C (color) - Output level	286 mVp-p (75 Ω)
Jack	S-Video jack

Video output

Output level	1 Vp-p (75 Ω)
Jack	RCA jack

Audio output (1 stereo pair)

Output level	During audio output 200 mVrms (1 kHz, –20 dB)
Number of channels	2
Jacks	RCA jack

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level	During audio output 200 mVrms (1 kHz, –20 dB)
Number of channels	6
Jacks	RCA jack

Audio characteristics

Frequency response	
	4 Hz to 44 kHz(DVD fs: 96 kHz)
	4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio	118 dB
Dynamic range	108 dB
Total harmonic distortion	0.0009 %
Wow and flutter	Limit of measurement (0.001% W. PEAK) or lower

Digital output

Optical digital output	Optical digital jack
Coaxial digital output	RCA jack

Other terminals

Control in	Minijack (3.5 ø)
Control out	Minijack (3.5 ø)

Accessories

Stereo audio cable	1
Video cable	1
4-pin S400 i.LINK cable	1
Power cable	1
Remote control	1
AA/R6P dry cell batteries	2
Operating Instructions	
DV-S755Ai	2

Note

- The specifications and design of this product are subject to change without notice, due to improvement.

- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.
- "DTS" is a registered trademark of Digital Theater Systems, Inc.
- TruSurround and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

A

B

C

D

E

F

2. EXPLODED VIEWS AND PARTS LIST

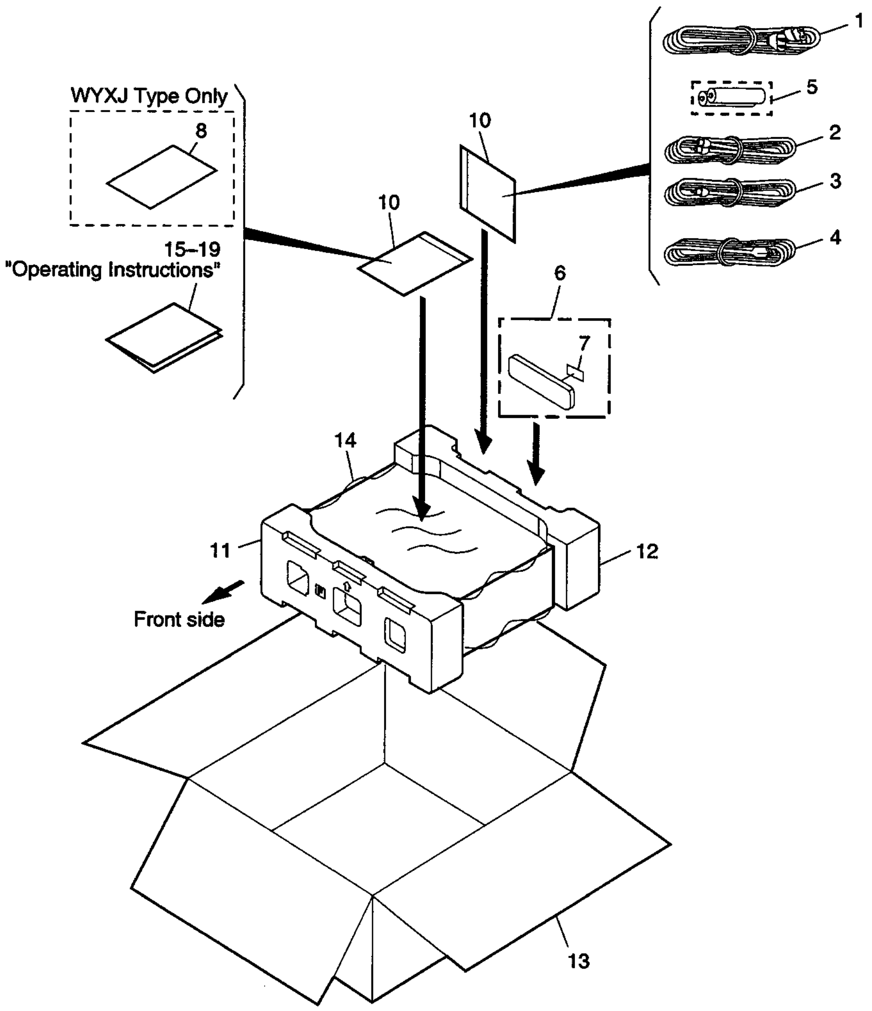
NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *Screws adjacent to ▼ mark on product are used for disassembly.*

● *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING


1
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4
WYXJ Type Only
8
10
10
15–19
"Operating Instructions"
6
7
14
11
12
Front side
13

PACKING parts List

Mark	No.	Description	Part No.
⚠	1	Power Cable	See Contrast table (2)
	2	Stereo Audio Cable (L = 1.5m)	VDE1052
	3	Video Cable (L = 1.5m)	VDE1053
	4	4-pin S400 i.LINK Cable (L = 1.5m)	VDE1076
NSP	5	AA/R6P Dry Cell Battery	VEM1031
	6	Remote Control	See Contrast table (2)
	7	Battery Cover	See Contrast table (2)
NSP	8	Warranty Card	See Contrast table (2)
	9	•••••	
	10	Polyethylene Bag	VHL1051
	11	Pad F	VHA1311
	12	Pad R	VHA1312

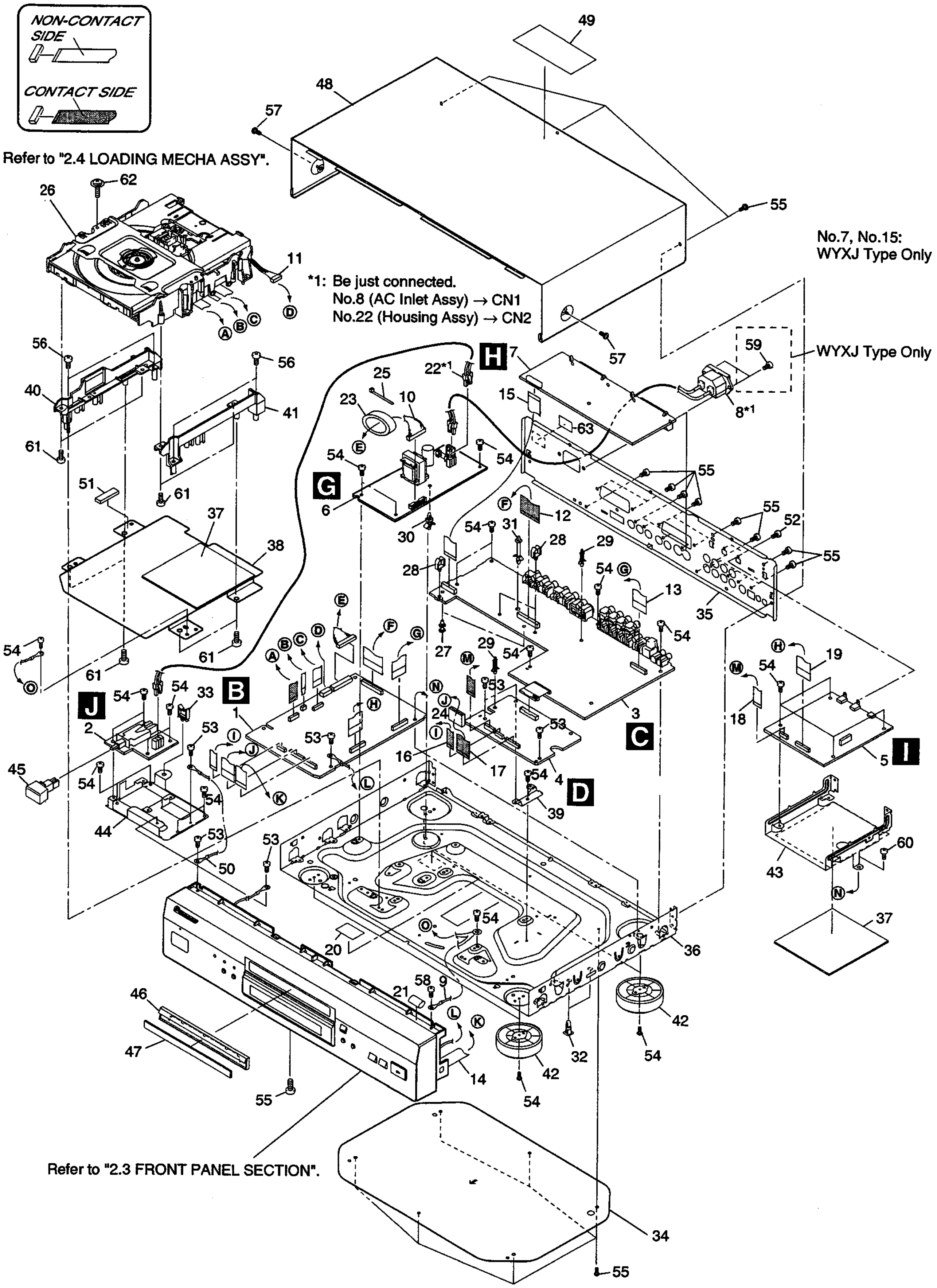
Mark	No.	Description	Part No.
	13	Packing Case	See Contrast table (2)
	14	Mirror Mat Sheet	VHL1068
	15	Operating Instructions (English / Spanish)	See Contrast table (2)
	16	Operating Instructions (French / German)	See Contrast table (2)
	17	Operating Instructions (Italian / Dutch)	See Contrast table (2)
	18	Operating Instructions (English)	See Contrast table (2)
	19	Operating Instructions (Trad-Chinese)	See Contrast table (2)

(2) CONTRAST TABLE

DV-757Ai/WYXJ and DV-S755Ai/RLXJ/NC are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-757Ai/WYXJ	DV-S755Ai/ RLXJ/NC
⚠	1	Power Cable	ADG7053	ADG1154
	6	Remote Control	VXX2836	VXX2837
	7	Battery Cover	VNK4936	VNK4422
NSP	8	Warranty Card	ARY7022	Not used
	13	Packing Case	VHG2248	VHG2250
	15	Operating Instructions (English / Spanish)	VRD1173	Not used
	16	Operating Instructions (French / German)	VRD1174	Not used
	17	Operating Instructions (Italian / Dutch)	VRD1175	Not used
	18	Operating Instructions (English)	Not used	VRB1309
	19	Operating Instructions (Trad-Chinese)	Not used	VRC1170

2.2 EXTERIOR SECTION


NON-CONTACT SIDE
CONTACT SIDE
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Refer to "2.4 LOADING MECHA ASSY".

*1: Be just connected.
No.8 (AC Inlet Assy) → CN1
No.22 (Housing Assy) → CN2

No.7, No.15:
WYXJ Type Only

WYXJ Type Only

Refer to "2.3 FRONT PANEL SECTION".

EXTERIOR SECTION parts List

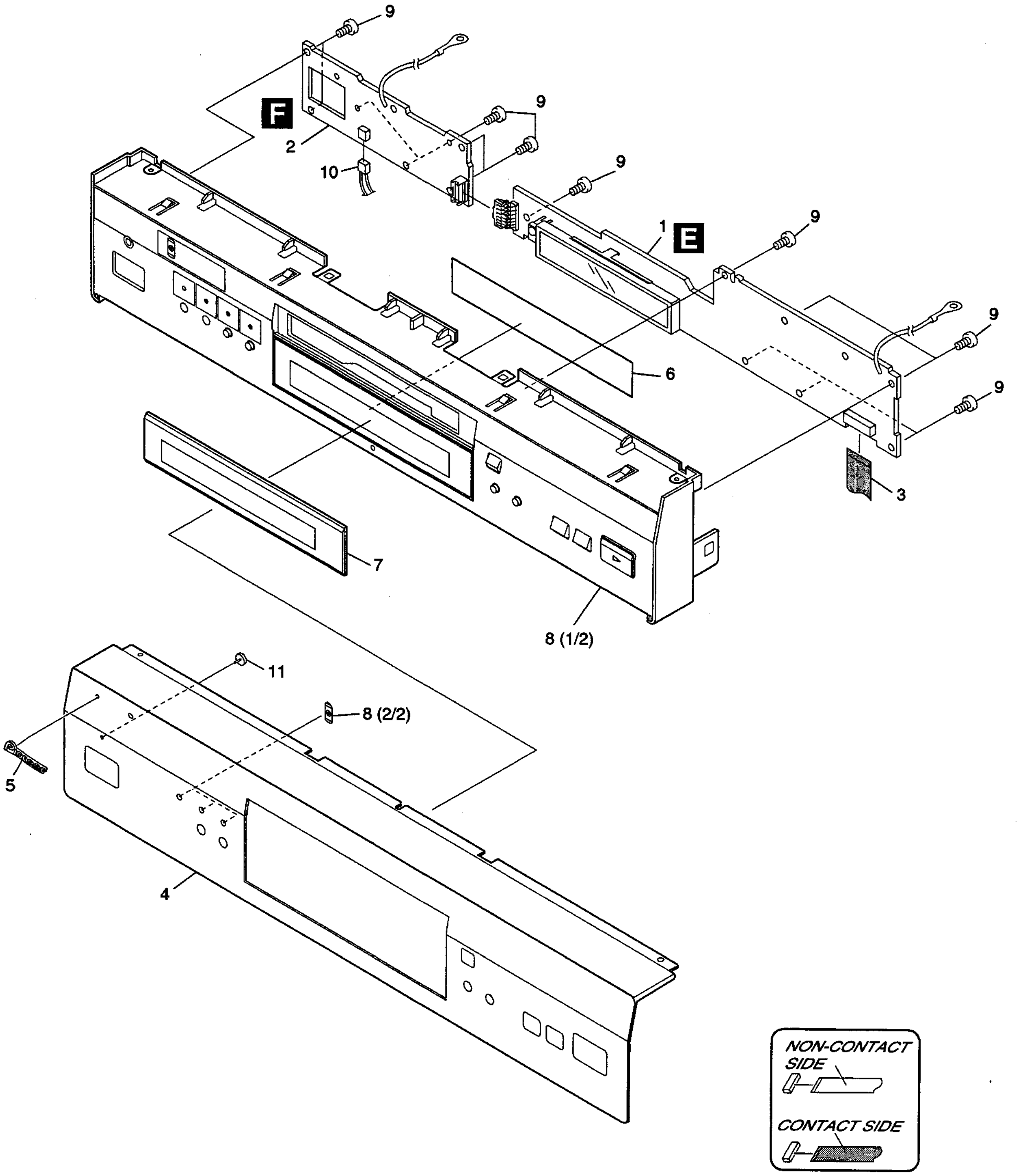
Mark	No.	Description	Part No.
	1	DVDM Assy	See Contrast table (2)
	2	MSWB Assy	VWG2390
	3	JACB Assy	See Contrast table (2)
	4	SACDB Assy	VWG2353
	5	ILKB Assy	VWG2391
⚠	6	POWER SUPPLY Unit	VWR1361
	7	SCRB Assy	See Contrast table (2)
⚠	8	AC Inlet Assy	See Contrast table (2)
NSP	9	Earth Lead Unit	VDA1903
	10	Connector Assy	PF13PP-D25
	11	Connector Assy	PG05KK-E30
	12	FFC (30P, JACB)	VDA1905
	13	FFC (21P, JACB)	VDA1906
	14	FFC (17P, FLKB)	VDA1907
	15	FFC (19P, SCRB)	See Contrast table (2)
	16	FFC (20P, DSP)	VDA1909
	17	FFC (40P, SACD)	VDA1910
	18	FFC (13P, ILKB)	VDA1912
	19	FFC (24P, ILKB)	VDA1924
	20	F Cushion	VEB1348
	21	Gasket (6.4X9.5)	VEC2322
⚠ NSP	22	Housing Assy	VKP2278
	23	Ferrite Core	VTH1044
	24	Ferrite Core	VTH1045
NSP	25	Binder	ZCA-BK1
NSP	26	LOADING MECHA Assy	VWT1203
NSP	27	PCB Spacer (3X6)	AEC7156
	28	Mini Clamp	AEC7373
NSP	29	PCB Support	REC1285
	30	PCB Support	VEC2184
	31	PCB Holder	See Contrast table (2)
	32	PCB Holder	VEC2283
	33	Wire Saddle	VEC2310
NSP	34	Bottom Plate	VNA2469
	35	Rear Panel	See Contrast table (2)
NSP	36	Base Chassis	VNA2521
	37	MH Spacer 2	VEC2319
	38	Mechanism Holder	VNE2266
NSP	39	PCB Base	VNE2276
	40	Adapter 27L	VNL1926
	41	Adapter 27R	VNL1927
	42	Insulator	VXA2424
	43	PCB Holder	VNE2280
	44	PCB Holder 2	VNE2283
NSP	45	Power Key 2	See Contrast table (2)
	46	Tray Panel	See Contrast table (2)
	47	Door	See Contrast table (2)
	48	Bonnet S	See Contrast table (2)
	49	Label	VRW1872
NSP	50	Cord with Plug	DE012VF0
	51	F Cushion 2	VEB1350
	52	Screw	BBZ26P060FZK
	53	Screw	BBZ30P060FCC
	54	Screw	BBZ30P060FMC
	55	Screw	BBZ30P080FZK
	56	Screw	BBZ30P180FMC
	57	Screw	BCZ40P060FNI
	58	Screw	BPZ30P100FMC
	59	Screw	See Contrast table (2)
	60	Screw	IBZ30P080FCC
	61	Screw	PPZ30P080FMC
	62	Screw	Z39-019
NSP	63	ID Label	VRW1877

(2) CONTRAST TABLE

DV-757Ai/WYXJ and DV-S755Ai/RLXJ/NC are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-757Ai/WYXJ	DV-S755Ai/ RLXJ/NC
	1	DVDM Assy	VWS1540	VWS1534
	3	JACB Assy	VWV1917	VWV1919
	7	SCRB Assy	VWV1922	Not used
⚠	8	AC Inlet Assy	ADX7406	VKP2268
	15	FFC (19P, SCRB)	VDA1908	Not used
	31	PCB Holder	VEC2215	Not used
	35	Rear Panel	VNA2490	VNA2492
NSP	45	Power Key 2	VNK5103	VNK5104
	46	Tray Panel	VNK5085	VNK5074
	47	Door	VEC2278	VEC2300
	48	Bonnet Case S	VXX2847	VXX2848
	59	Screw	CBZ30P080FZK	Not used

2.3 FRONT PANEL SECTION


9
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1
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9
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7
8 (1/2)
11
8 (2/2)
5
4
NON-CONTACT SIDE
CONTACT SIDE

FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	FLKY Assy	See Contrast table (2)
	2	KEYB Assy	VWG2369
	3	FFC (17P, FLKB)	VDA1907
	4	Aluminum Panel	See Contrast table (2)
	5	Pioneer Badge	See Contrast table (2)
	6	FL Filter	VEC2281

Mark	No.	Description	Part No.
	7	FL Lens	See Contrast table (2)
	8	Front Panel Assy	See Contrast table (2)
	9	Screw	BBZ30P080FZK
	10	Connector Assy	PF02PP2R07
NSP	11	LED Lens 2	VNK5105

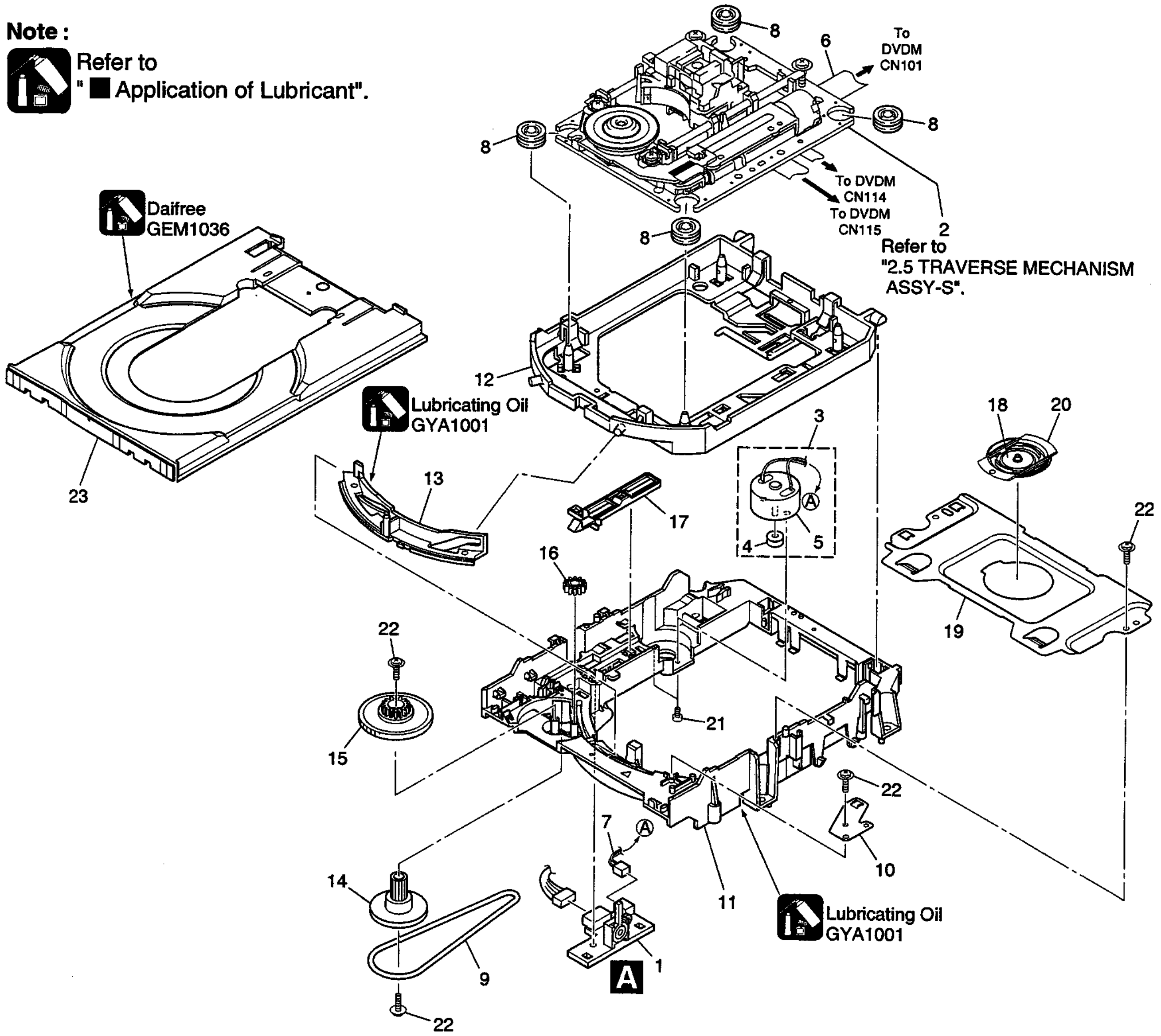
(2) CONTRAST TABLE

DV-757Ai/WYXJ and DV-S755Ai/RLXJ/NC are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-757Ai/WYXJ	DV-S755Ai/ RLXJ/NC
	1	FLKY Assy	VWG2358	VWG2360
	4	Aluminum Panel	VAH1394	VAH1403
	5	Pioneer Badge	VAM1124	PAN1377
	7	FL Lens	VEC2296	VEC2317
	8	Front Panel Assy	VXA2522	VXA2524

2.4 LOADING MECHA ASSY

Note :
Refer to
" ■ Application of Lubricant".

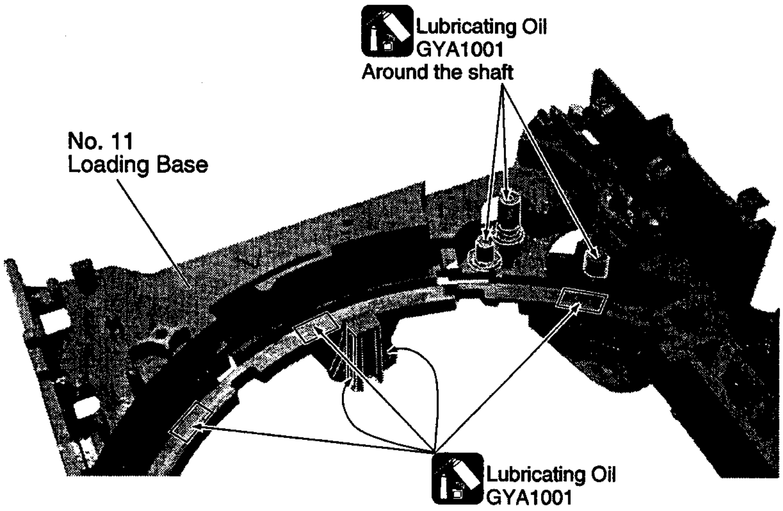

8
6
To DVDM CN101
8
8
To DVDM CN114
To DVDM CN115
2
Refer to "2.5 TRAVERSE MECHANISM ASSY-S".
8
Daifree GEM1036
12
Lubricating Oil GYA1001
23
13
3
A
18
20
17
4
5
22
16
19
22
15
21
22
7
A
10
14
11
Lubricating Oil GYA1001
9
A
1
22

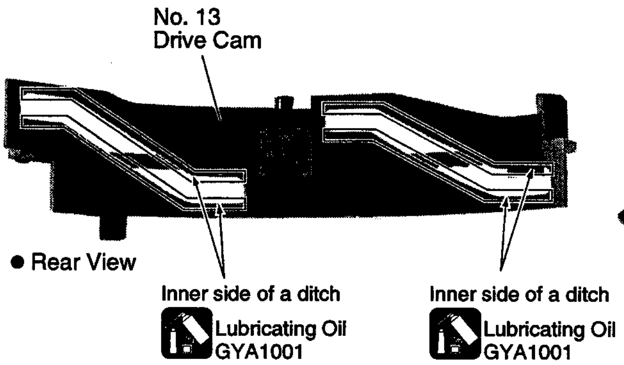
LOADING MECHA ASSY parts List

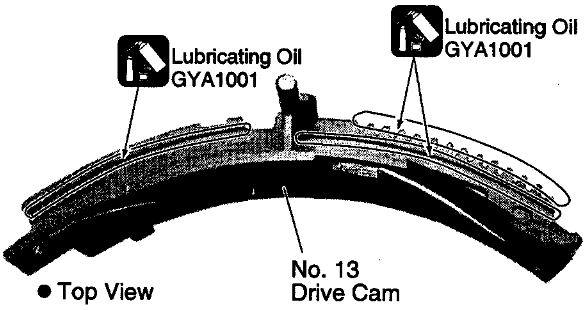
Mark	No.	Description	Part No.
NSP	1	LOAB Assy	VWG2346
	2	Traverse Mechanism Assy-S	VXX2858
	3	Loading Motor Assy	VXX2505
	4	Motor Pulley	PNW1634
	5	Carriage DC Motor / 0.3W	PXM1027
	6	Flexible Cable (26P)	VDA1864
	7	Connector Assy 2P	VKP2253
	8	Float Rubber	VEB1327
	9	Belt	VEB1330
	10	Stabilizer	VNE2253
	11	Loading Base	VNL1917
	12	Float Base DVD	VNL1918
	13	Drive Cam	VNL1919
	14	Gear Pulley	VNL1921
	15	Loading Gear	VNL1922

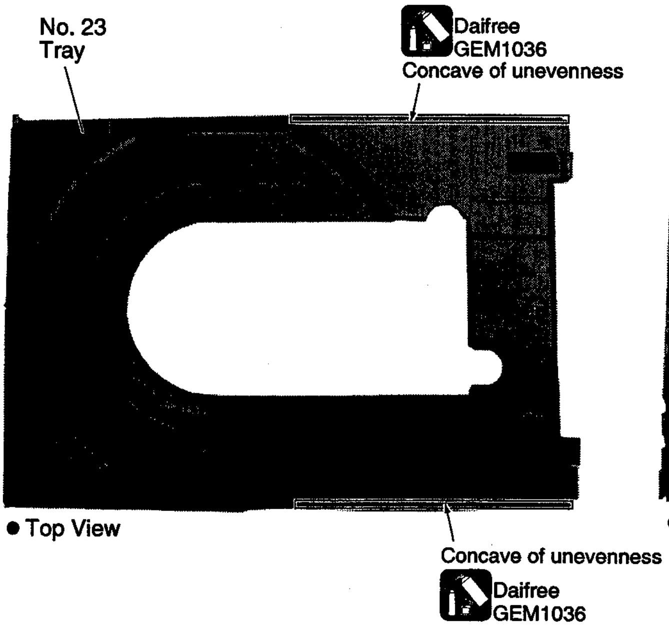
Mark	No.	Description	Part No.
	16	Drive Gear	VNL1923
	17	SW Lever	VNL1925
	18	Clamper Plate	VNE2251
	19	Bridge	VNE2252
	20	Clamper	VNL1924
	21	Screw	JGZ17P028FMC
	22	Screw	Z39-019
	23	Tray	VNL1920

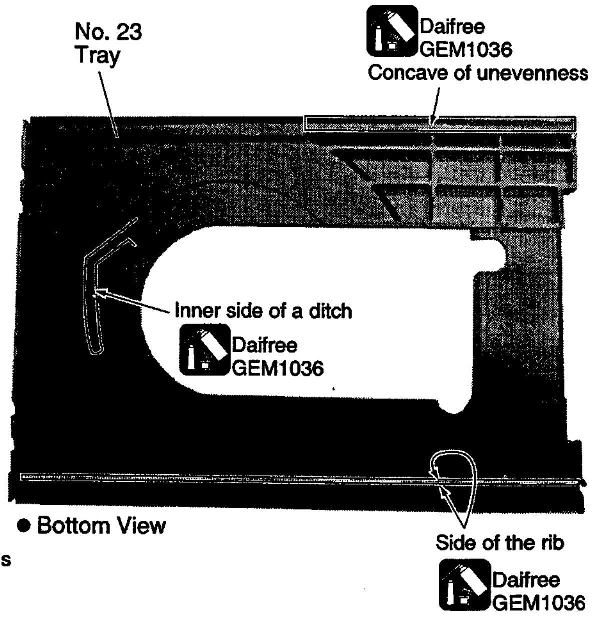
Application of Lubricant


Lubricating Oil
GYA1001
Around the shaft
No. 11
Loading Base
Lubricating Oil
GYA1001

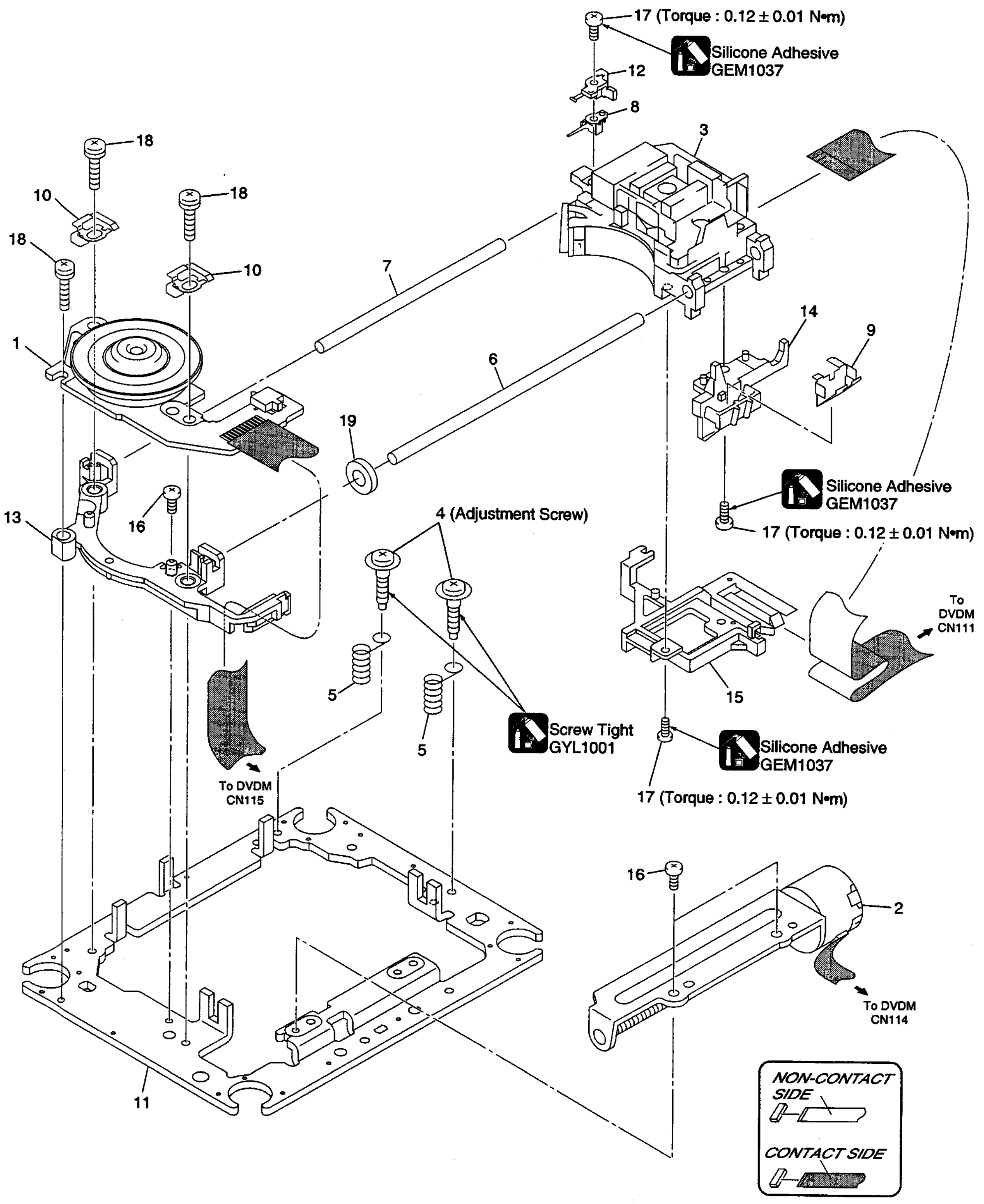

No. 13
Drive Cam
● Rear View
Inner side of a ditch
Lubricating Oil
GYA1001
Inner side of a ditch
Lubricating Oil
GYA1001


Lubricating Oil
GYA1001
Lubricating Oil
GYA1001
● Top View
No. 13
Drive Cam


No. 23
Tray
Daifree
GEM1036
Concave of unevenness
● Top View
Concave of unevenness
Daifree
GEM1036


No. 23
Tray
Daifree
GEM1036
Concave of unevenness
Inner side of a ditch
Daifree
GEM1036
● Bottom View
Side of the rib
Daifree
GEM1036

2.5 TRAVERSE MECHANISM ASSY-S


17 (Torque : 0.12 ± 0.01 N•m)
Silicone Adhesive GEM1037
12
8
3
18
10
18
18
10
7
1
14
9
6
19
Silicone Adhesive GEM1037
17 (Torque : 0.12 ± 0.01 N•m)
13
16
4 (Adjustment Screw)
To DVDM CN111
5
5
15
Screw Tight GYL1001
Silicone Adhesive GEM1037
17 (Torque : 0.12 ± 0.01 N•m)
To DVDM CN115
16
2
To DVDM CN114
11
NON-CONTACT SIDE
CONTACT SIDE

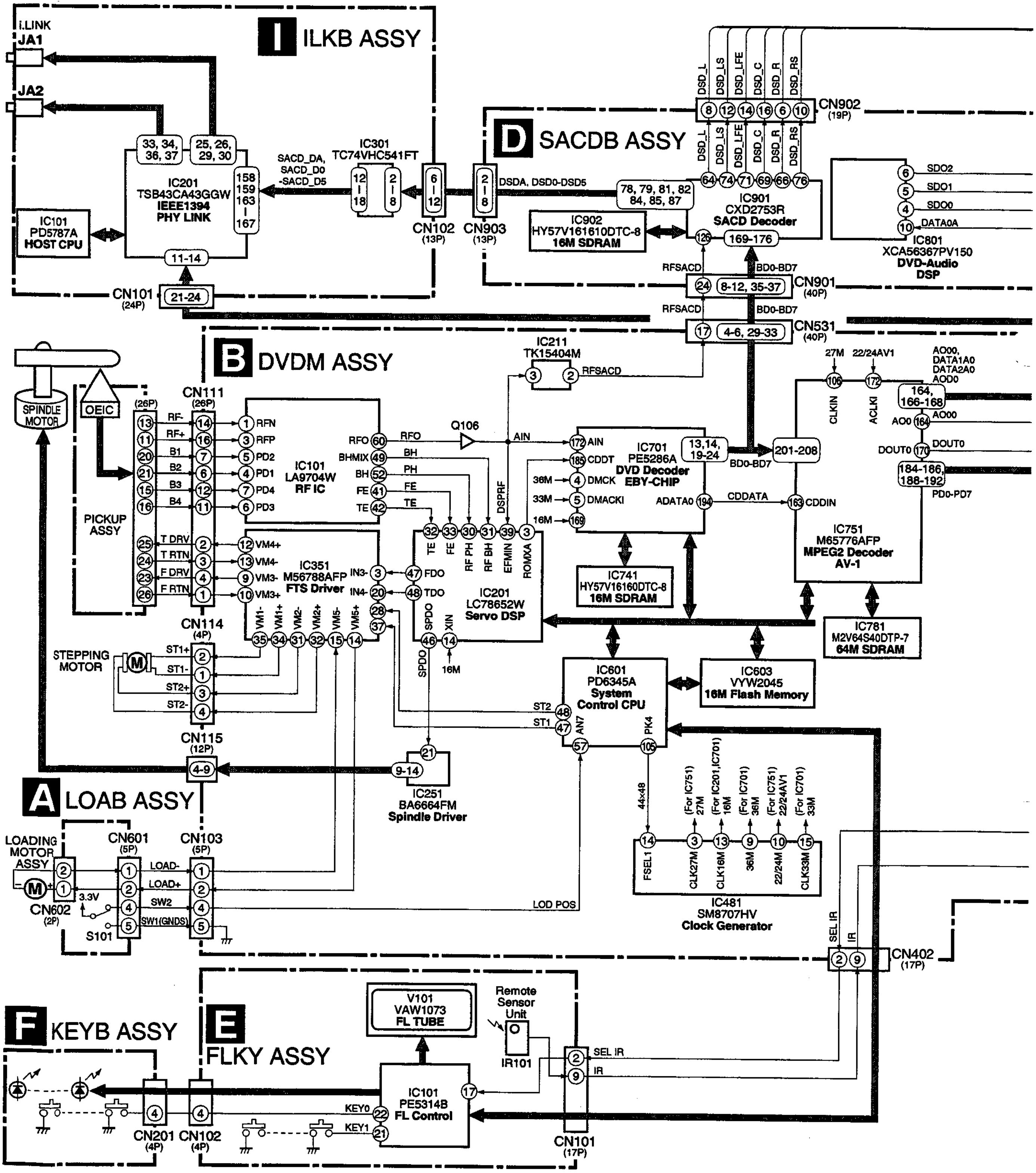
TRAVERSE MECHANISM ASSY-S parts List

Mark	No.	Description	Part No.
	1	Spindle Motor	VXM1088
	2	Stepping Motor	VXM1090
⚠	3	Pickup Assy-S	OXX8004
	4	Skew Screw	VBA1080
	5	Skew Spring	VBH1335
	6	Guide Bar	VLL1514
	7	Sub Guide Bar	VLL1515
	8	Hold Spring	VNC1017
	9	Joint Spring	VNC1019
	10	Support Spring	VNC1020
NSP	11	Mechanism Chassis	VNE2248
	12	Slider	VNL1811
	13	Spacer	VNL1913
	14	Joint	VNL1914
	15	FFC Holder	VNL1915
	16	Screw	BBZ20P050FZK
	17	Tapping Screw	OBA8009
	18	Screw	PMA26P100FMC
	19	Damper Sheet	VEB1335

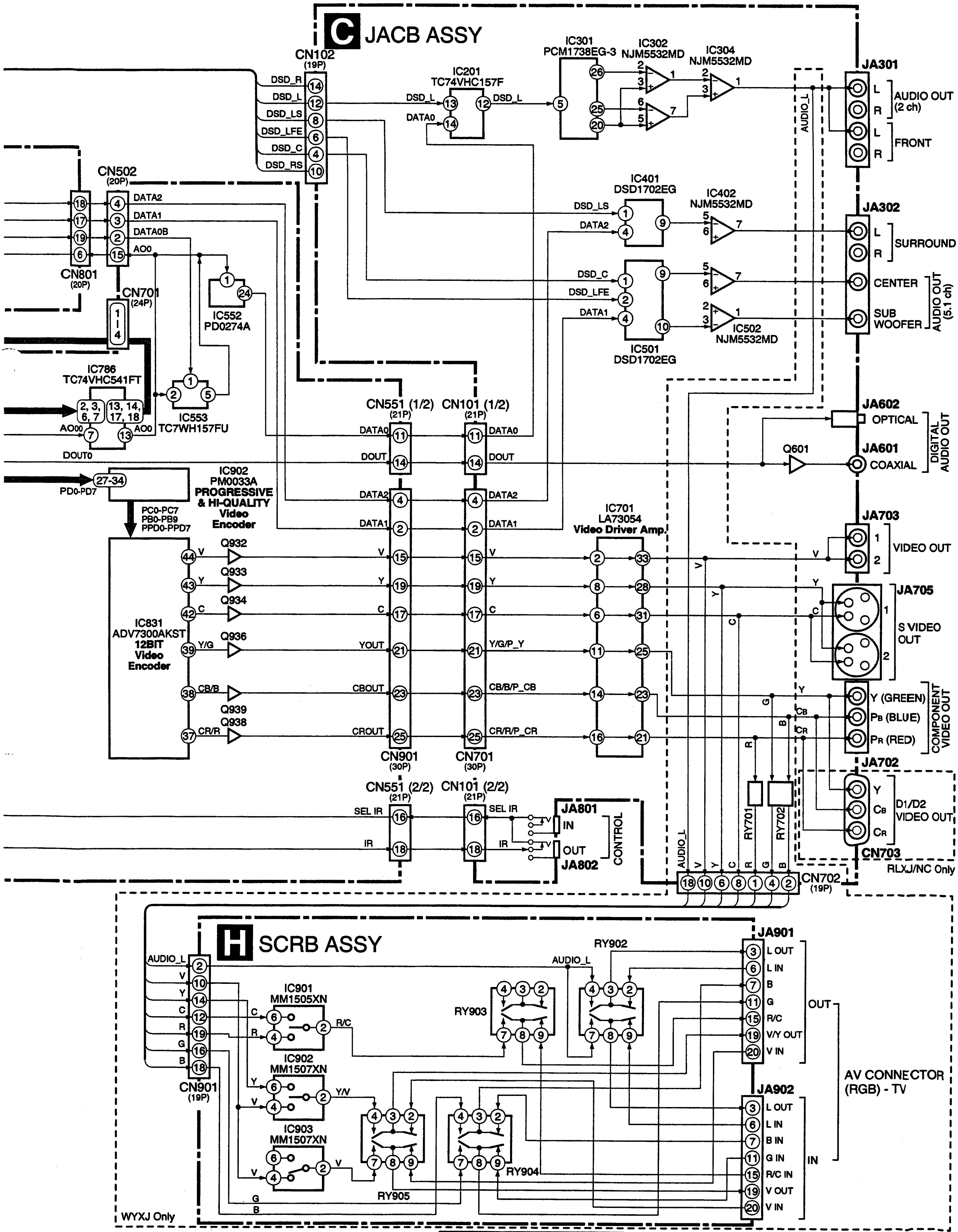
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

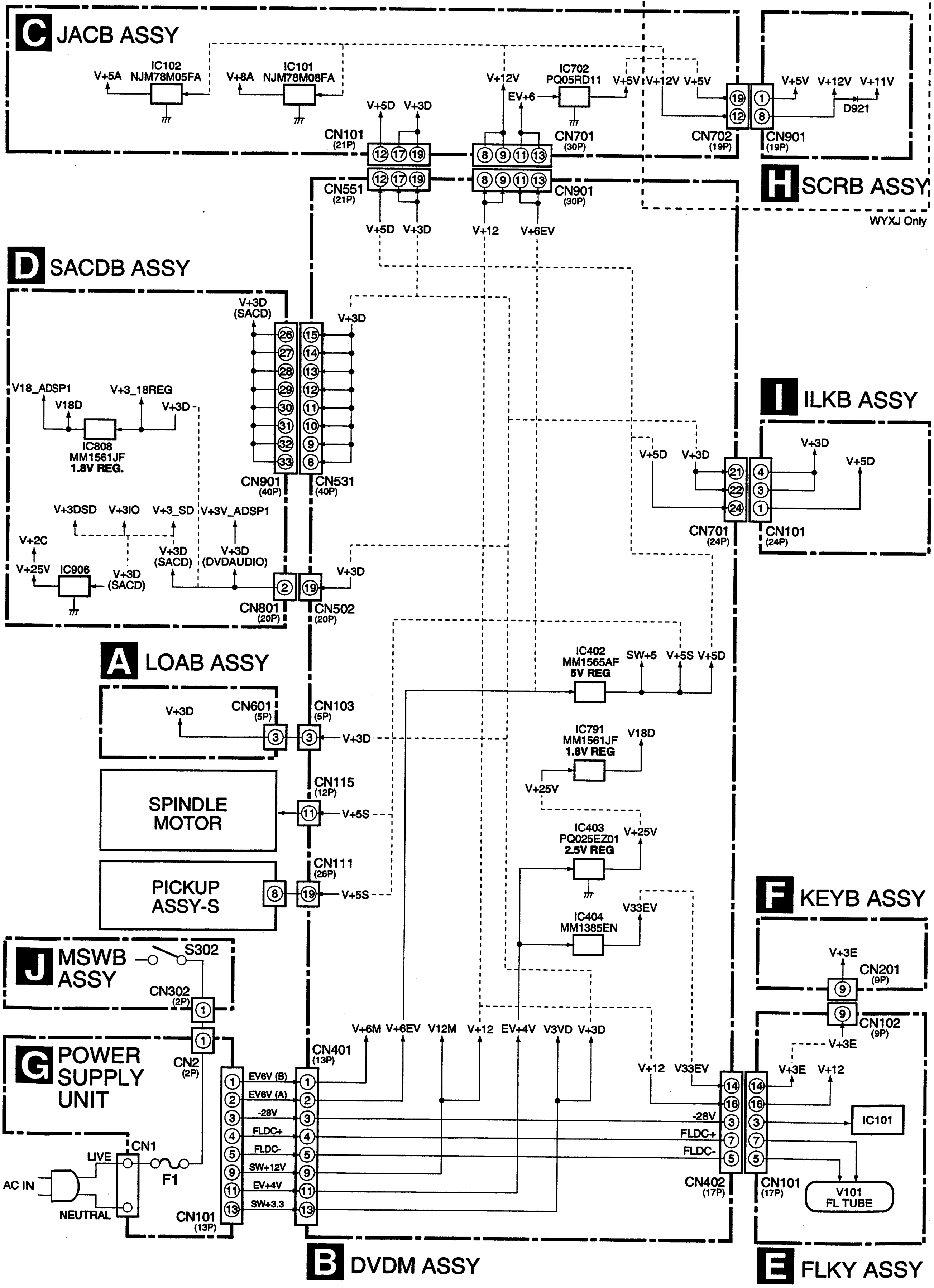
■ SIGNAL ROUTE



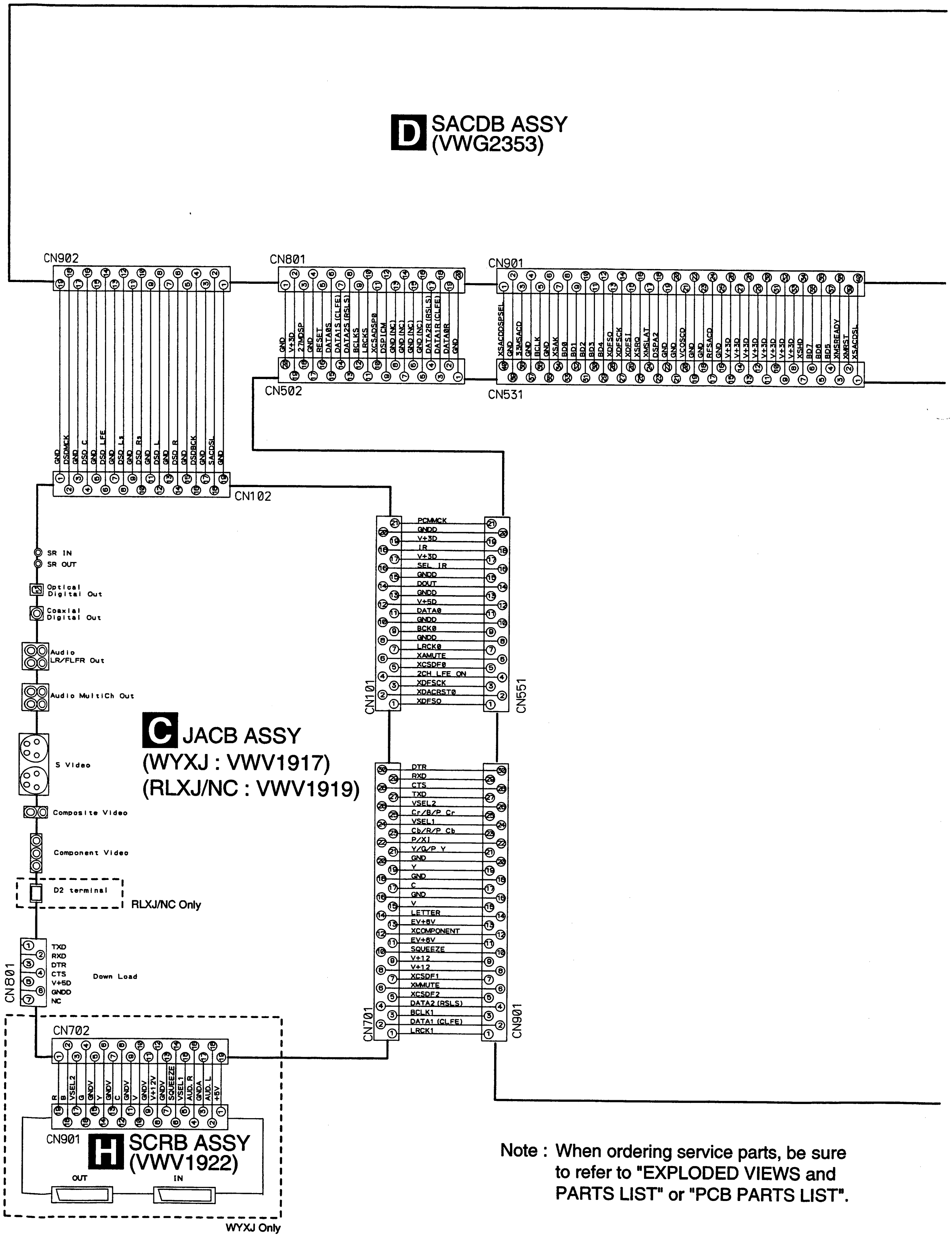
I ILKB ASSY
i.LINK
JA1
JA2
33, 34, 36, 37
25, 26, 29, 30
IC201
TSB43CA43GGW
IEEE1394
PHY LINK
158 159 163 167
11-14
IC101
PD5787A
HOST CPU
SACD_DA, SACD_D0 -SACD_D5
IC301
TC74VHC541FT
CN102 (13P)
CN903 (13P)
CN101 (24P)
21-24
D SACDB ASSY
DSD_L DSD_LS DSD_LFE DSD_C DSD_R DSD_RS
CN902 (19P)
DSDA, DSD0-DSD5
78, 79, 81, 82 84, 85, 87
IC901
CXD2753R
SACD Decoder
169-176
IC902
HY57V161610DTC-8
16M SDRAM
RFSACD
BD0-BD7
CN901 (40P)
8-12, 35-37
CN531 (40P)
4-6, 29-33
IC801
XCA56367PV150
DVD-Audio DSP
SDO2
SDO1
SDO0
DATA0A
B DVDM ASSY
IC211
TK15404M
RFSACD
SPINDLE MOTOR
OEIC
PICKUP ASSY
CN111 (26P)
(26P)
RF-
RF+
B1
B2
B3
B4
T DRV
T RTN
F DRV
F RTN
RFN
RFP
PD2
PD1
PD4
PD3
IC101
LA9704W
RF IC
RFO
BHMIX
BH
FE
TE
Q106
AIN
PH
VM4+
VM4-
VM3-
VM3+
IC351
M56788AFP
FTS Driver
IN3-
IN4-
FDO
TDO
VM1- VM1+ VM2- VM2+ VM5- VM5+
TE FE RF PH RF BH EFMIN ROMXA
DSPRF
IC201
LC78652W
Servo DSP
SPDO
XIN
16M
CN114 (4P)
STEPPING MOTOR
ST1+
ST1-
ST2+
ST2-
CN115 (12P)
4-9
9-14
IC251
BA6664FM
Spindle Driver
IC701
PE5286A
DVD Decoder
EBY-CHIP
CDDT
DMCK
DMACKI
36M
33M
16M
ADATA0
CDDATA
13,14, 19-24
BD0-BD7
201-208
IC741
HY57V16160DTC-8
16M SDRAM
27M
22/24AV1
CLKIN
ACLKI
AO00, DATA1A0 DATA2A0 AOD0
164, 166-168
AO0
DOUT0
184-186, 188-192
PD0-PD7
CDDIN
IC751
M65776AFP
MPEG2 Decoder
AV-1
IC781
M2V64S40DTP-7
64M SDRAM
IC601
PD6345A
System Control CPU
ST2
ST1
AN7
PK4
IC603
VYW2045
16M Flash Memory
44x48
(For IC751) 27M
(For IC201,IC701) 16M
(For IC701) 36M
(For IC751) 22/24AV1
(For IC701) 33M
FSEL1
CLK27M
CLK16M
36M
22/24M
CLK33M
IC481
SM8707HV
Clock Generator
LOD POS
A LOAB ASSY
LOADING MOTOR ASSY
CN602 (2P)
CN601 (5P)
CN103 (5P)
3.3V
S101
LOAD-
LOAD+
SW2
SW1(GNDS)
SEL IR
IR
CN402 (17P)
F KEYB ASSY
E FLKY ASSY
V101
VAW1073
FL TUBE
Remote Sensor Unit
IR101
IC101
PE5314B
FL Control
KEY0
KEY1
SEL IR
IR
CN201 (4P)
CN102 (4P)
CN101 (17P)


C JACB ASSY
CN102 (19P)
DSD_R
DSD_L
DSD_LS
DSD_LFE
DSD_C
DSD_RS
IC201 TC74VHC157F
DATA0
IC301 PCM1738EG-3
IC302 NJM5532MD
IC304 NJM5532MD
JA301
AUDIO OUT (2 ch)
FRONT
AUDIO_L
IC401 DSD1702EG
IC402 NJM5532MD
JA302
SURROUND
CENTER
SUB WOOFER
AUDIO OUT (5.1 ch)
IC501 DSD1702EG
IC502 NJM5532MD
CN502 (20P)
DATA2
DATA1
DATA0B
AO0
CN801 (20P)
CN701 (24P)
IC552 PD0274A
IC786 TC74VHC541FT
IC553 TC7WH157FU
AO00
DOUT0
JA602
OPTICAL
JA601
COAXIAL
DIGITAL AUDIO OUT
Q601
CN551 (1/2) (21P)
CN101 (1/2) (21P)
DOUT
IC902 PM0033A PROGRESSIVE & HI-QUALITY Video Encoder
PD0-PD7
PC0-PC7 PB0-PB9 PPD0-PPD7
IC831 ADV7300AKST 12BIT Video Encoder
Q932
Q933
Q934
Q936
Q939
Q938
V
Y
C
Y/G
CB/B
CR/R
YOUT
CBOUT
CROUT
Y/G/P_Y
CB/B/P_CB
CR/R/P_CR
IC701 LA73054 Video Driver Amp.
JA703
VIDEO OUT
JA705
S VIDEO OUT
Y (GREEN)
PB (BLUE)
PR (RED)
COMPONENT VIDEO OUT
JA702
D1/D2 VIDEO OUT
CN703
RLXJ/NC Only
CN901 (30P)
CN701 (30P)
CN551 (2/2) (21P)
CN101 (2/2) (21P)
SEL IR
IR
JA801 IN
OUT JA802
CONTROL
RY701
RY702
CN702 (19P)
H SCRB ASSY
CN901 (19P)
IC901 MM1505XN
IC902 MM1507XN
IC903 MM1507XN
R/C
Y/V
RY903
RY902
RY904
RY905
JA901
L OUT
L IN
B
G
R/C
V/Y OUT
V IN
OUT
JA902
B IN
G IN
R/C IN
V OUT
IN
AV CONNECTOR (RGB) - TV
WYXJ Only

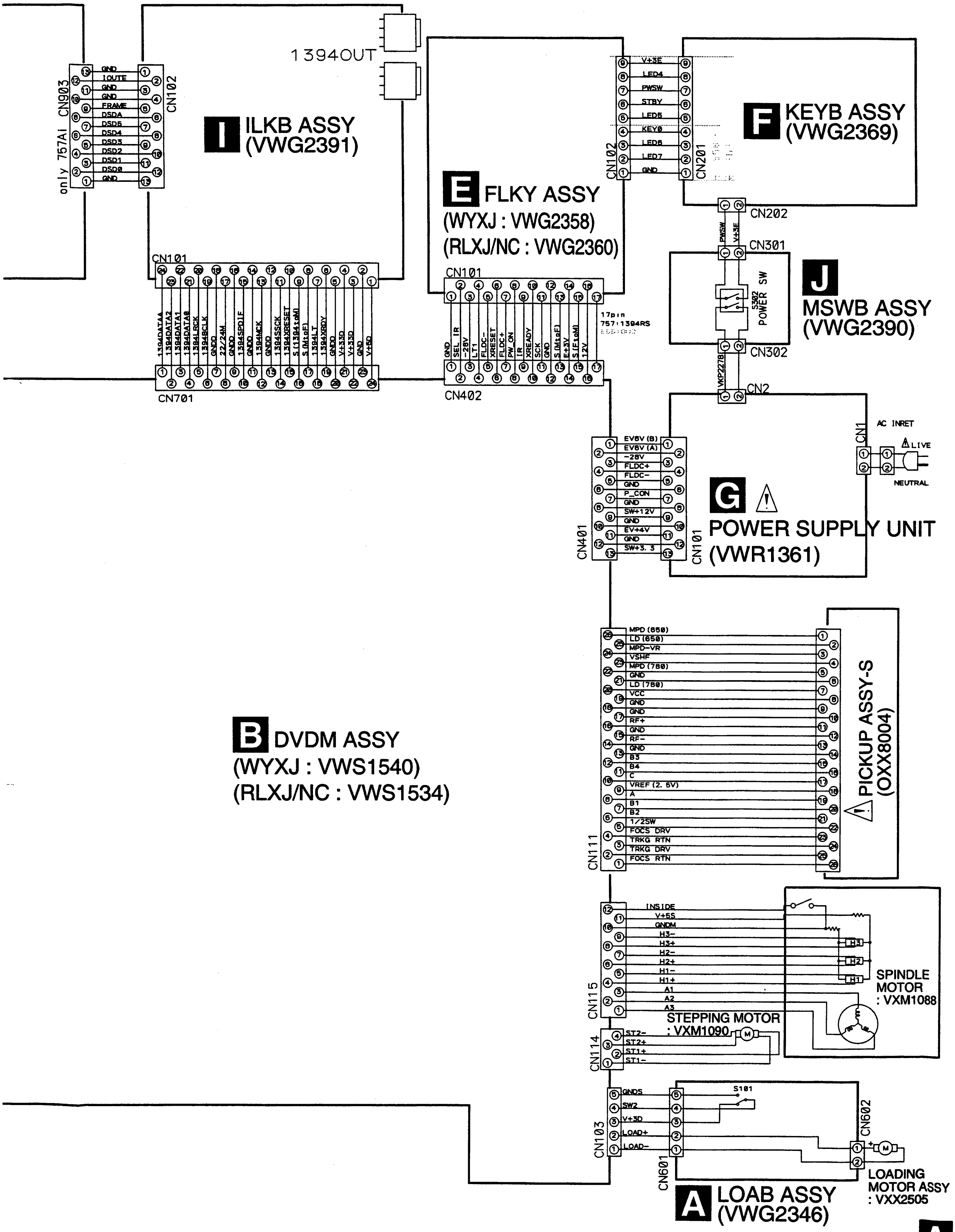
■ POWER SUPPLY BLOCK


C JACB ASSY
IC102
NJM78M05FA
V+5A
IC101
NJM78M08FA
V+8A
V+12V
IC702
PQ05RD11
EV+6
V+5V
V+12V
V+5V
V+5D
V+3D
CN101
(21P)
CN701
(30P)
CN702
(19P)
CN901
(19P)
V+5V
V+12V
V+11V
D921
H SCRB ASSY
WYXJ Only
CN551
(21P)
CN901
(30P)
V+5D
V+3D
V+12
V+6EV
D SACDB ASSY
V+3D
(SACD)
V+3D
V18_ADSP1
V18D
V+3_18REG
V+3D
IC808
MM1561JF
1.8V REG.
CN901
(40P)
CN531
(40P)
V+3DSD
V+3IO
V+3_SD
V+3V_ADSP1
V+2C
V+3D
(SACD)
V+3D
(DVDAUDIO)
V+25V
IC906
V+3D
(SACD)
CN801
(20P)
CN502
(20P)
V+3D
I ILKB ASSY
V+3D
V+5D
V+5D
V+3D
CN701
(24P)
CN101
(24P)
A LOAB ASSY
V+3D
CN601
(5P)
CN103
(5P)
V+3D
IC402
MM1565AF
5V REG
SW+5
V+5S
V+5D
IC791
MM1561JF
1.8V REG
V18D
V+25V
CN115
(12P)
SPINDLE MOTOR
V+5S
IC403
PQ025EZ01
2.5V REG
V+25V
CN111
(26P)
PICKUP ASSY-S
V+5S
IC404
MM1385EN
V33EV
F KEYB ASSY
V+3E
CN201
(9P)
J MSWB ASSY
S302
CN302
(2P)
CN102
(9P)
V+3E
G POWER SUPPLY UNIT
CN2
(2P)
V+6M
V+6EV
V12M
V+12
EV+4V
V3VD
V+3D
CN401
(13P)
V+12
V33EV
V+3E
V+12
EV6V (B)
EV6V (A)
-28V
FLDC+
FLDC-
SW+12V
EV+4V
SW+3.3
-28V
FLDC+
FLDC-
IC101
CN1
LIVE
AC IN
F1
NEUTRAL
CN101
(13P)
CN402
(17P)
CN101
(17P)
V101
FL TUBE
B DVDM ASSY
E FLKY ASSY
A
B
C
D
E
F

3.2 LOAB ASSY and OVERALL WIRING DIAGRAM

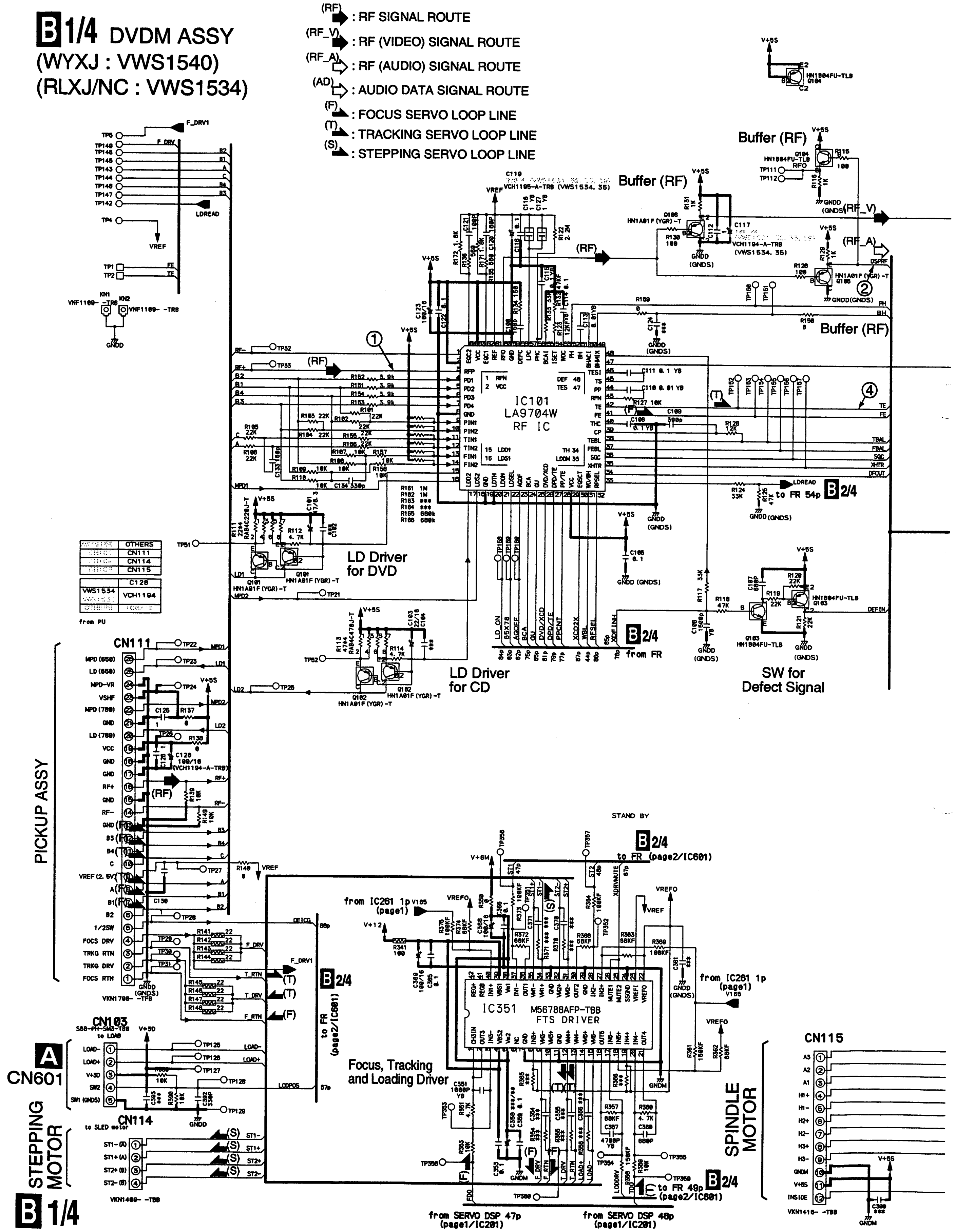

D SACDB ASSY
(VWG2353)
CN902
CN801
GND
V+3D
27MDSP
GND
RESET
DATA0S
DATA1S (CLFE)
DATA2S (RSLS)
BCLKS
LRCKS
XCSADSP0
DSPICM
GND (NC)
GND (NC)
GND (NC)
GND (NC)
DATA2R (RSLS)
DATA1R (CLFE)
DATA0R
GND
CN502
CN901
XSACDDSPSEL
GND
33MSACD
GND
BCLK
GND
XSAK
BD0
BD1
BD2
BD3
BD4
XDFSO
XDFSCK
XDFSI
XSRQ
XMSLAT
DSPA2
GND
GND
VCOSCD
GND
GND
RFSACD
GND
V+3D
V+3D
V+3D
V+3D
V+3D
V+3D
V+3D
XSHD
BD7
BD6
BD5
XMSREADY
XMRST
XSACDSL
CN531
GND
DSDMCK
GND
DSD C
GND
DSD LFE
GND
DSD Ls
GND
DSD Rs
GND
DSD L
GND
DSD R
GND
DSDBCK
GND
SACDSL
GND
CN102
SR IN
SR OUT
Optical Digital Out
Coaxial Digital Out
Audio LR/FLFR Out
Audio MultiCh Out
S Video
Composite Video
Component Video
D2 terminal
RLXJ/NC Only
C JACB ASSY
(WYXJ : VWV1917)
(RLXJ/NC : VWV1919)
PCMMCK
GNDD
V+3D
IR
V+3D
SEL IR
GNDD
DOUT
GNDD
V+5D
DATA0
GNDD
BCK0
GNDD
LRCK0
XAMUTE
XCSDF0
2CH LFE ON
XDFSCK
XDACRST0
XDFSO
CN101
CN551
DTR
RXD
CTS
TXD
VSEL2
Cr/B/P Cr
VSEL1
Cb/R/P Cb
P/XI
Y/G/P Y
GND
Y
GND
C
GND
V
LETTER
EV+6V
XCOMPONENT
EV+6V
SQUEEZE
V+12
V+12
XCSDF1
XMMUTE
XCSDF2
DATA2 (RSLS)
BCLK1
DATA1 (CLFE)
LRCK1
CN701
CN901
TXD
RXD
DTR
CTS
V+5D
GNDD
NC
Down Load
CN801
CN702
R
B
VSEL2
G
GNDV
Y
GNDV
C
GNDV
V
GNDV
V+12V
GNDV
SQUEEZE
VSEL1
AUD. R
GNDA
AUD. L
+5V
CN901
H SCRB ASSY
(VWV1922)
OUT
IN
WYXJ Only

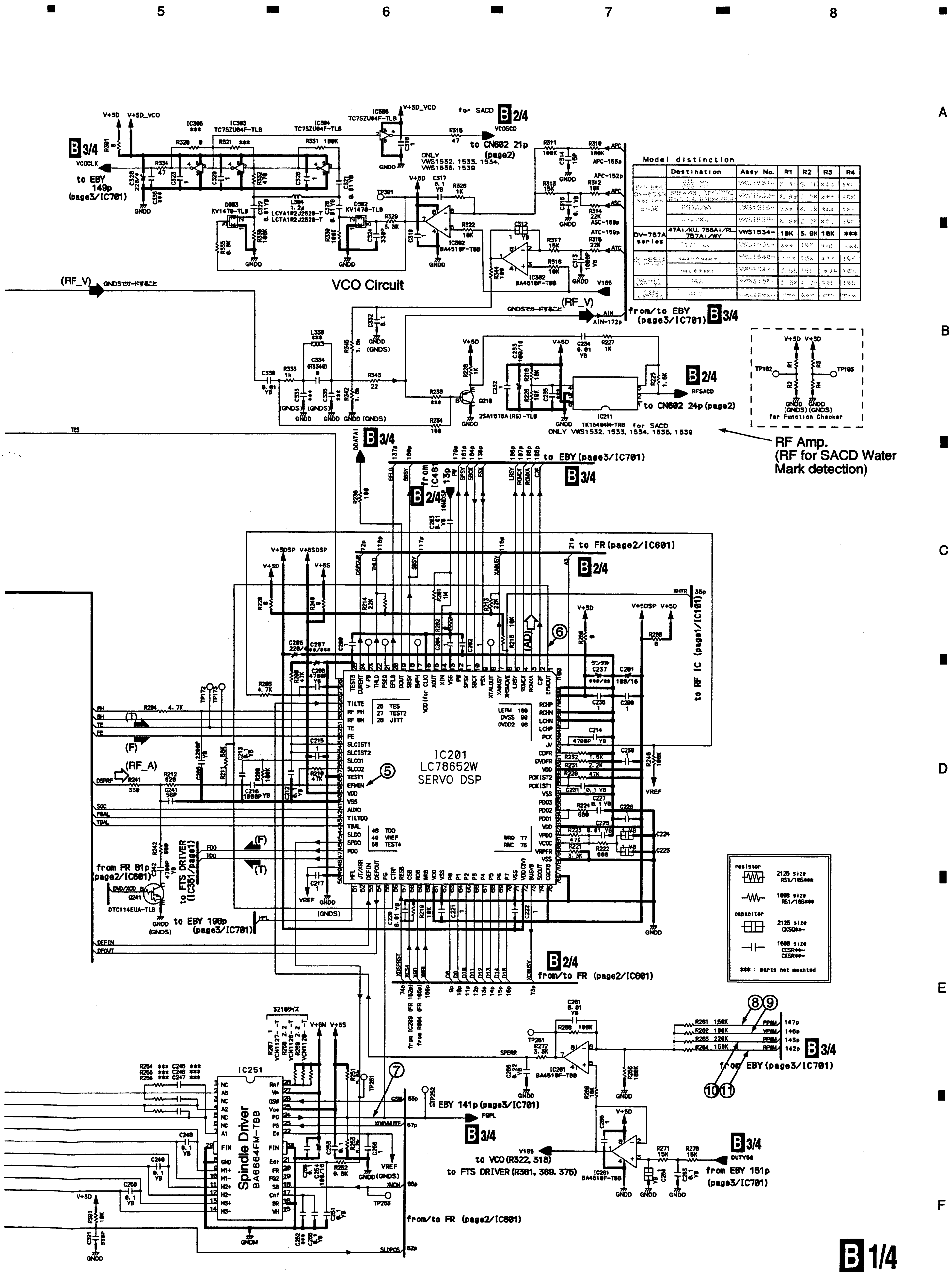
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".


I ILKB ASSY
(VWG2391)
1394OUT
only 757Ai CN903
CN102
GND
IOUTE
GND
GND
FRAME
DSDA
DSD6
DSD4
DSD3
DSD2
DSD1
DSD0
GND
CN101
1394DATA4
1394DATA2
1394DATA1
1394DATA0
1394LRCK
1394BCLK
GNDD
22/24M
GNDD
1394SPDIF
GNDD
1394MCK
GNDD
1394SSCK
1394XRESET
S(1394:oM)
S(MtoF)
1394LT
1394XRDY
GNDD
V+33D
V+33D
GND
V+5D
CN701
E FLKY ASSY
(WYXJ : VWG2358)
(RLXJ/NC : VWG2360)
CN101
GND
SEL_IR
-28V
LT1
FLDC-
XRESET
FLDC+
PW_ON
IR
XREADY
SCK
GND
S(MtoF)
E+3V
S(FtoM)
12V
17pin
757:1394RS
CN402
CN102
V+3E
LED4
PWSW
STBY
LED5
KEY0
LED6
LED7
GND
CN201
F KEYB ASSY
(VWG2369)
CN202
PWSW
V+3E
CN301
S302
POWER SW
J MSWB ASSY
(VWG2390)
CN302
VKP2278
CN2
CN1
AC INRET
LIVE
NEUTRAL
G POWER SUPPLY UNIT
(VWR1361)
CN401
CN101
EV6V (B)
EV6V (A)
-28V
FLDC+
FLDC-
GND
P_CON
GND
SW+12V
GND
EV+4V
GND
SW+3.3
B DVDM ASSY
(WYXJ : VWS1540)
(RLXJ/NC : VWS1534)
CN111
MPD (650)
LD (650)
MPD-VR
VSHF
MPD (780)
GND
LD (780)
VCC
GND
GND
RF+
GND
RF-
GND
B3
B4
C
VREF (2.5V)
A
B1
B2
1/2SW
FOCS DRV
TRKG RTN
TRKG DRV
FOCS RTN
PICKUP ASSY-S
(OXX8004)
CN115
INSIDE
V+5S
GNDM
H3-
H3+
H2-
H2+
H1-
H1+
A1
A2
A3
H3
H2
H1
SPINDLE
MOTOR
: VXM1088
STEPPING MOTOR
: VXM1090
M
CN114
ST2-
ST2+
ST1+
ST1-
CN103
GNDS
SW2
V+3D
LOAD+
LOAD-
S101
CN601
CN602
M
LOADING
MOTOR ASSY
: VXX2505
A LOAB ASSY
(VWG2346)

A

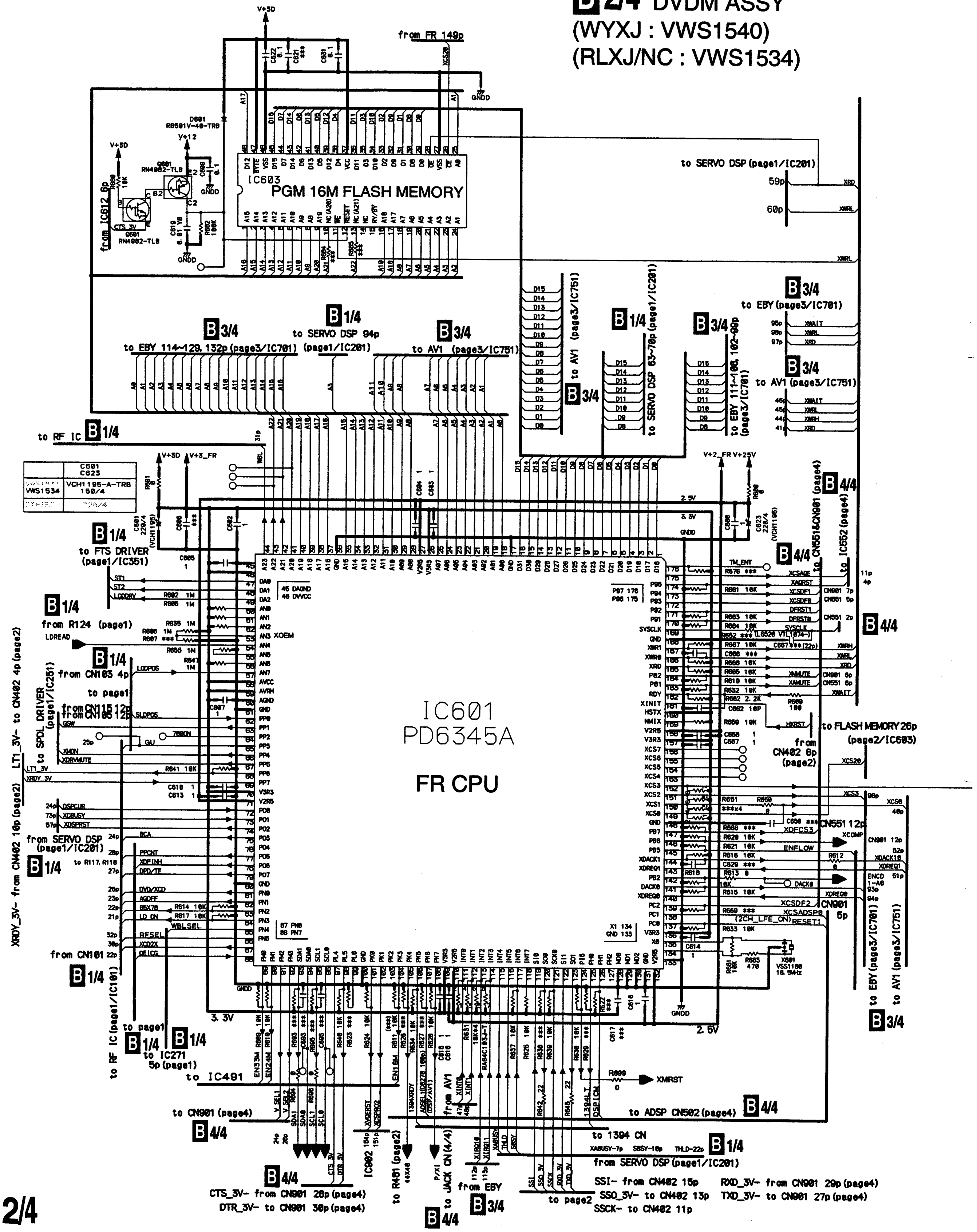
3.3 DVDM ASSY 1/4 [FTS BLOCK]


B 1/4 DVDM ASSY
(WYXJ : VWS1540)
(RLXJ/NC : VWS1534)
(RF) : RF SIGNAL ROUTE
(RF_V) : RF (VIDEO) SIGNAL ROUTE
(RF_A) : RF (AUDIO) SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : STEPPING SERVO LOOP LINE
IC101 LA9704W RF IC
Buffer (RF)
Buffer (RF)
Buffer (RF)
LD Driver for DVD
LD Driver for CD
SW for Defect Signal
Q101 HN1A01F (YGR) -T
Q102 HN1A01F (YGR) -T
Q103 HN1B04FU-TLB
Q104 HN1B04FU-TLB
Q106 HN1A01F (YGR) -T
B 2/4 from FR
to FR 54p B 2/4
LDREAD
PICKUP ASSY
CN111
MPD (650)
LD (650)
MPD-VR
VSHF
MPD (780)
GND
LD (780)
VCC
RF+
RF-
B3
B4
C
VREF (2.5V)
A
B1
B2
1/2SW
FOCS DRV
TRKG RTN
TRKG DRV
FOCS RTN
VKN1790- -TFB
OTHERS
CN111
CN114
CN115
C128
VWS1534
VCH1194
from PU
B 2/4 to FR (page2/IC601)
A CN601
CN103
S5B-PH-SM3-TBB to LOAD
LOAD-
LOAD+
V+3D
SW2
SW1 (GNDS)
STEPPING MOTOR
CN114
to SLED motor
ST1-
ST1+
ST2+
ST2-
VKN1400- -TBB
B 1/4
STAND BY
B 2/4 to FR (page2/IC601)
from IC201 1p (page1)
IC351 M56788AFP-TBB FTS DRIVER
Focus, Tracking and Loading Driver
from IC201 1p (page1)
to FR 49p (page2/IC601) B 2/4
from SERVO DSP 47p (page1/IC201)
from SERVO DSP 48p (page1/IC201)
CN115
SPINDLE MOTOR
A3
A2
A1
H1+
H1-
H2+
H2-
H3+
H3-
GNDM
V+5S
INSIDE
VKN1410- -TBB
V+5S
VREF
GNDD (GNDS)
① ② ④

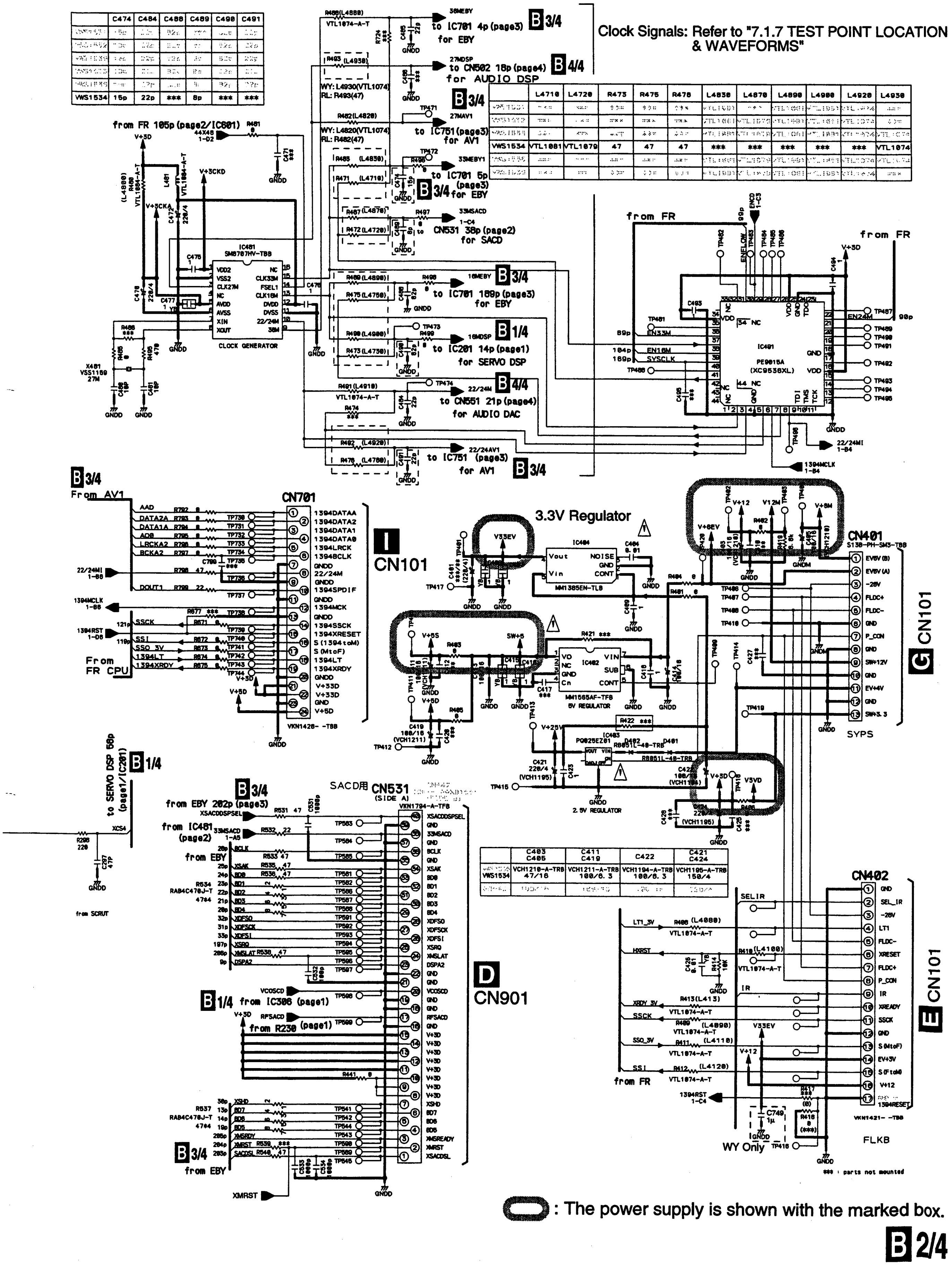

5
6
7
8
A
B
C
D
E
F
VCO Circuit
B 3/4
VCOCLK
to EBY 149p (page3/IC701)
for SACD B 2/4
VCOSCD
to CN602 21p (page2)
ONLY VWS1532, 1533, 1534, VWS1535, 1539
IC305 TC7SZU04F-TLB
IC303 TC7SZU04F-TLB
IC304 TC7SZU04F-TLB
IC306 TC7SZU04F-TLB
D303 KV1470-TLB
D302 KV1470-TLB
L304 1.2μ LCYA1R2J2520-T LCTA1R2J2520-T
IC302 BA4510F-TBB
APC-153p
AFC-152p
ASC-160p
ATC-159p
Model distinction
Destination
Assy No.
R1
R2
R3
R4
DV-757A series
47Ai/KU, 755Ai/RL, 757Ai/WY
VWS1534-
10K
3.9K
10K
***
(RF_V)
GNDSでガードすること
from/to EBY (page3/IC701) B 3/4
AIN-172p
RF Amp. (RF for SACD Water Mark detection)
Q210 2SA1576A(RS)-TLB
IC211 TK15404M-TRB for SACD ONLY VWS1532, 1533, 1534, 1535, 1539
RFSACD
to CN602 24p (page2)
B 2/4
TP102
TP103
for Function Checker
DDATA1 B 3/4
to EBY (page3/IC701)
B 3/4
from IC401 13p B 2/4
to FR (page2/IC601)
B 2/4
IC201 LC78652W SERVO DSP
⑤
⑥
XHTR 35p
to RF IC (page1/IC101)
(RF_A)
DSPRF
to FTS DRIVER (IC351/page1)
from FR 81p (page2/IC601)
Q241 DTC114EUA-TLB
to EBY 198p (page3/IC701)
DEFIN
DFOUT
B 2/4 from/to FR (page2/IC601)
resistor
2125 size RS1/10S***
1608 size RS1/16S***
capacitor
2125 size CKSQ**-
1608 size CCSR**- CKSR**-
*** : parts not mounted
⑧⑨
⑩⑪
from EBY (page3/IC701) B 3/4
IC201 BA4510F-TBB
IC251 Spindle Driver BA6664FM-TBB
⑦
EBY 141p (page3/IC701)
FGPL
B 3/4
V165
to VCO (R322, 318)
to FTS DRIVER (R361, 369, 375)
B 3/4 DUTY50
from EBY 151p (page3/IC701)
from/to FR (page2/IC601)
B 1/4

3.4 DVDM ASSY 2/4 [FR BLOCK]

B 2/4 DVDM ASSY
(WYXJ : VWS1540)
(RLXJ/NC : VWS1534)


IC601
PD6345A
FR CPU
IC603
PGM 16M FLASH MEMORY
Q601 RN4982-TLB
D601 RB501V-40-TRB
V+3D
V+12
GNDD
from FR 149p
XCS20
from IC612 6p
to SERVO DSP (page1/IC201)
59p
60p
XRD
XWRL
XWRL
B 3/4 to EBY (page3/IC701)
B 3/4 to AV1 (page3/IC751)
B 1/4 to SERVO DSP 94p (page1/IC201)
B 3/4 to EBY 114~129, 132p (page3/IC701)
B 3/4 to AV1 (page3/IC751)
B 3/4 to AV1 (page3/IC751)
B 1/4 to SERVO DSP 63~70p (page1/IC201)
B 3/4 to EBY 111~108, 102~99p (page3/IC701)
B 1/4 to RF IC
C601 C623
VWS1534 VCH1195-A-TRB 150/4
B 1/4 to FTS DRIVER (page1/IC351)
B 1/4 from R124 (page1)
LDREAD
B 1/4 from CN103 4p
to page1
from CN115 12p
from CN105 12p
LT1_3V- to CN402 4p (page2)
to SPDL DRIVER (page1/IC251)
XRDY_3V- from CN402 10p (page2)
from SERVO DSP (page1/IC201)
B 1/4
to R117, R118
from CN101
B 1/4
to RF IC (page1/IC101)
to page1
B 1/4
B 1/4 to IC271 5p (page1)
to IC491
to CN901 (page4)
B 4/4
B 4/4 CTS_3V- from CN901 28p (page4)
DTR_3V- to CN901 30p (page4)
to R401 (page2)
to JACK CN (4/4)
B 4/4
from AV1
from EBY
B 3/4
to page2
to 1394 CN
B 1/4 from SERVO DSP (page1/IC201)
SSI- from CN402 15p
SSO_3V- to CN402 13p
SSCK- to CN402 11p
RXD_3V- from CN901 29p (page4)
TXD_3V- to CN901 27p (page4)
to ADSP CN502 (page4)
B 4/4
XMRST
B 4/4
to CN551&CN901 (page4)
to IC552 (page4)
B 4/4
to FLASH MEMORY 26p (page2/IC603)
from CN402 6p (page2)
CN551 12p
CN901 5p
to EBY (page3/IC701)
to AV1 (page3/IC751)
B 3/4
X601 VSS1180 16.9MHz
2.5V
3.3V
V+2_FR V+25V

B 2/4


IC481 SM8707HV-T88
CLOCK GENERATOR
from FR 105p (page2/IC601)
to IC701 4p (page3) for EBY
to CN502 18p (page4) for AUDIO DSP
to IC751 (page3) for AV1
to IC701 5p (page3) for EBY
CN531 38p (page2) for SACD
to IC701 189p (page3) for EBY
to IC201 14p (page1) for SERVO DSP
to CN551 21p (page4) for AUDIO DAC
to IC751 (page3) for AV1
from FR
IC491 PE9016A (XC9536XL)
CN701
From AV1
From FR CPU
VKN1428- -T88
I CN101
3.3V Regulator
IC404 MM1385EN-TLB
IC402 MM1565AF-TFB 5V REGULATOR
IC403 PQ025EZ01
2.5V REGULATOR
CN401 S13B-PH-SM3-TB8
SYPS
G CN101
to SERVO DSP 56p (page1/IC201)
B 1/4
from EBY 202p (page3)
from IC481 (page2)
from EBY
SACD用 CN531 (SIDE A)
VKN1794-A-TFB
B 1/4 from IC306 (page1)
from R230 (page1)
from EBY
XMRST
D CN901
CN402
from FR
WY Only
FLKB
VKN1421- -T88
E CN101
*** : parts not mounted

Clock Signals: Refer to "7.1.7 TEST POINT LOCATION & WAVEFORMS"

	C474	C484	C488	C489	C490	C491
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VWS1534	15p	22p	***	8p	***	***

	L4710	L4720	R473	R475	R476	L4830	L4870	L4890	L4900	L4920	L4930
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VWS1534	VTL1081	VTL1079	47	47	47	***	***	***	***	***	VTL1074
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

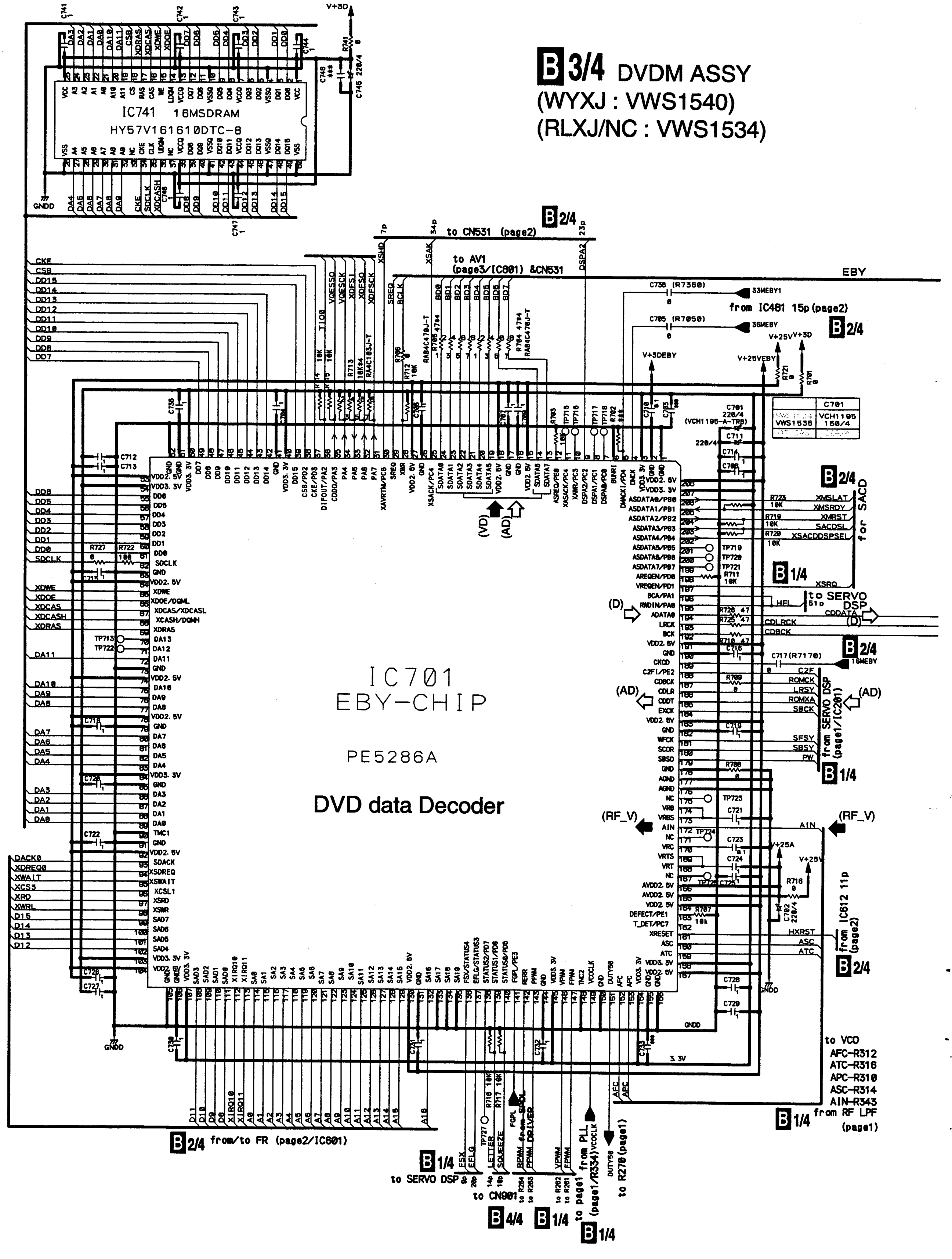
	C403 C405	C411 C419	C422	C421 C424
[illegible] VWS1534	VCH1210-A-TRB 47/16	VCH1211-A-TRB 100/6.3	VCH1194-A-TRB 100/6.3	VCH1195-A-TRB 150/4
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

: The power supply is shown with the marked box.

B 2/4

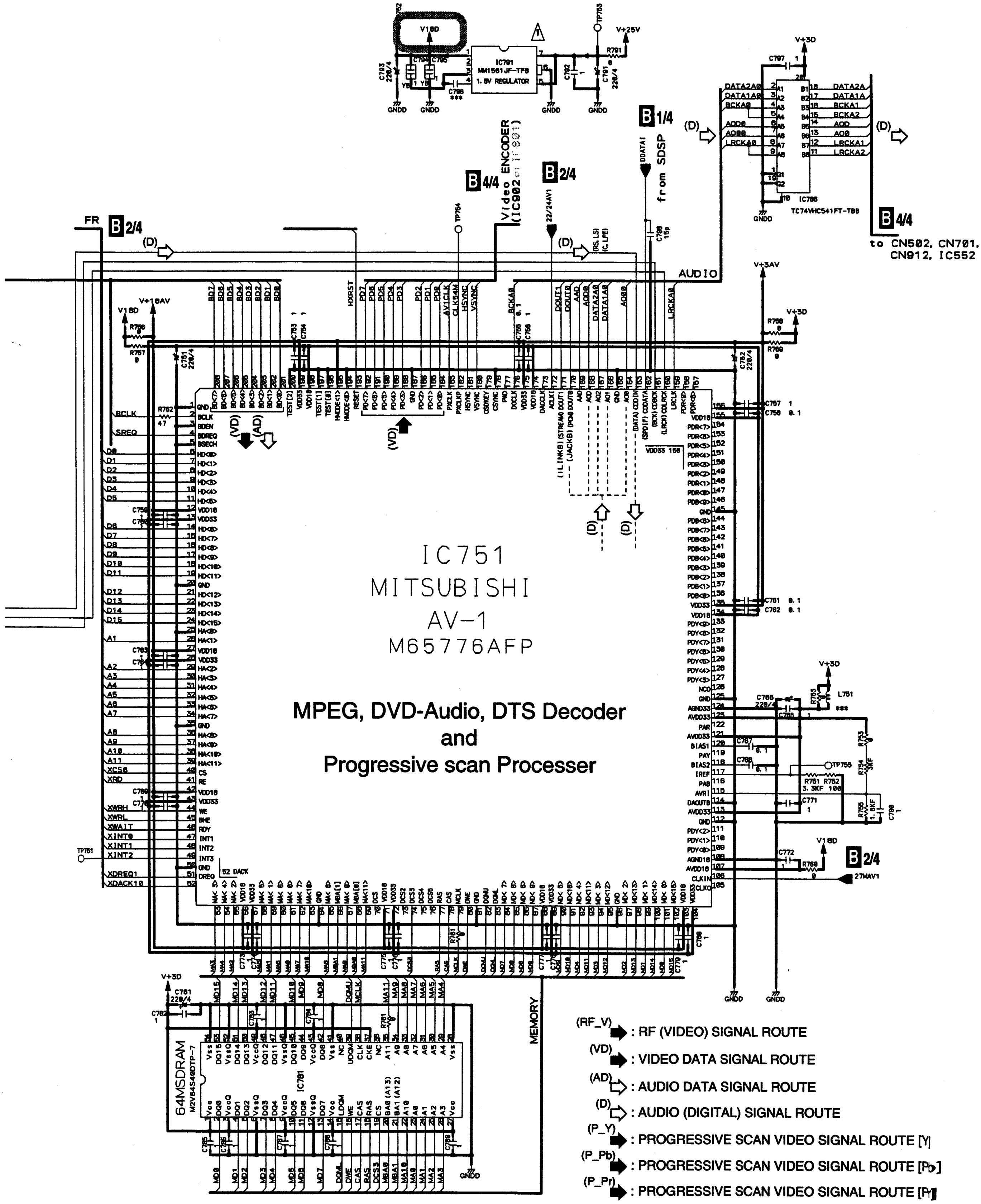
3.5 DVDM ASSY 3/4 [EBY/AV1 BLOCK]

B 3/4 DVDM ASSY
(WYXJ : VWS1540)
(RLXJ/NC : VWS1534)



IC741 16MSDRAM
HY57V161610DTC-8
IC701
EBY-CHIP
PE5286A
DVD data Decoder
V+3D
GNDD
B 2/4 to CN531 (page2)
to AV1 (page3/IC601) &CN531
EBY
from IC481 15p (page2)
33MEBY
36MEBY
V+3DEBY
V+25VEBY
V+25V
C701 220/4 (VCH1195-A-TRB)
VWS1535 VCH1195 150/4
B 2/4 for SACD
XMSLAT
XMSRDY
XMRST
SACDSL
XSACDDSPSEL
B 1/4 XSRQ
to SERVO DSP 51p
HFL
CDDATA
CDLRCK
CDBCK
B 2/4 16MEBY
C2F
ROMCK
LRSY
ROMXA
SBCK
from SERVO DSP (page1/IC201)
SFSY
SBSY
PW
B 1/4
(VD)
(AD)
(D)
(RF_V)
AIN
V+25A
from IC612 11p (page2)
HXRST
ASC
ATC
B 2/4
to VCO
AFC-R312
ATC-R316
APC-R310
ASC-R314
AIN-R343
from RF LPF (page1)
B 1/4
B 2/4 from/to FR (page2/IC601)
B 1/4 to SERVO DSP
FSX
EFLG
LETTER
SQUEEZE
to CN901
B 4/4
RPWM
FPWM
FG DRIVER
VPWM
B 1/4
from PLL (page1/R334)
VCOCLK
DUTY50
to R270 (page1)
B 1/4

▬ : The power supply is shown with the marked box.


V18D
IC791
MM1561JF-TFB
1.8V REGULATOR
C793 220/4
C794
C795
C796
C792
C791 220/4
R791
TP763
V+25V
GNDD
B 1/4
DDATAI
from SDSP
B 2/4
22/24AV1
B 4/4
Video ENCODER (IC902 of IF901)
TP754
FR
B 2/4
(D)
AUDIO
V+3D
C797
DATA2A0
DATA1A0
BCKA0
AOD0
AO00
LRCKA0
DATA2A
DATA1A
BCKA1
BCKA2
AOD
AO0
LRCKA1
LRCKA2
IC766
TC74VHC541FT-TBB
B 4/4
to CN502, CN701, CN912, IC552
V+3AV
V+18AV
V18D
R756
R757
C751 220/4
C752 220/4
R758
R759
BCLK
SREQ
R762 47
TP751
IC751
MITSUBISHI
AV-1
M65776AFP
MPEG, DVD-Audio, DTS Decoder
and
Progressive scan Processer
(VD)
(AD)
C766 220/4
L751
R753
R754 3KF
R751 3.3KF
R752 100
TP755
R755 1.8KF
C771
C772
R768
B 2/4
27MAV1
GNDD
MEMORY
IC781
64MSDRAM
M2V64S40DTP-7
C781 220/4
C782
V+3D
GNDD

(RF_V) ➡ : RF (VIDEO) SIGNAL ROUTE

(VD) ➡ : VIDEO DATA SIGNAL ROUTE

(AD) ⇨ : AUDIO DATA SIGNAL ROUTE

(D) ⇨ : AUDIO (DIGITAL) SIGNAL ROUTE

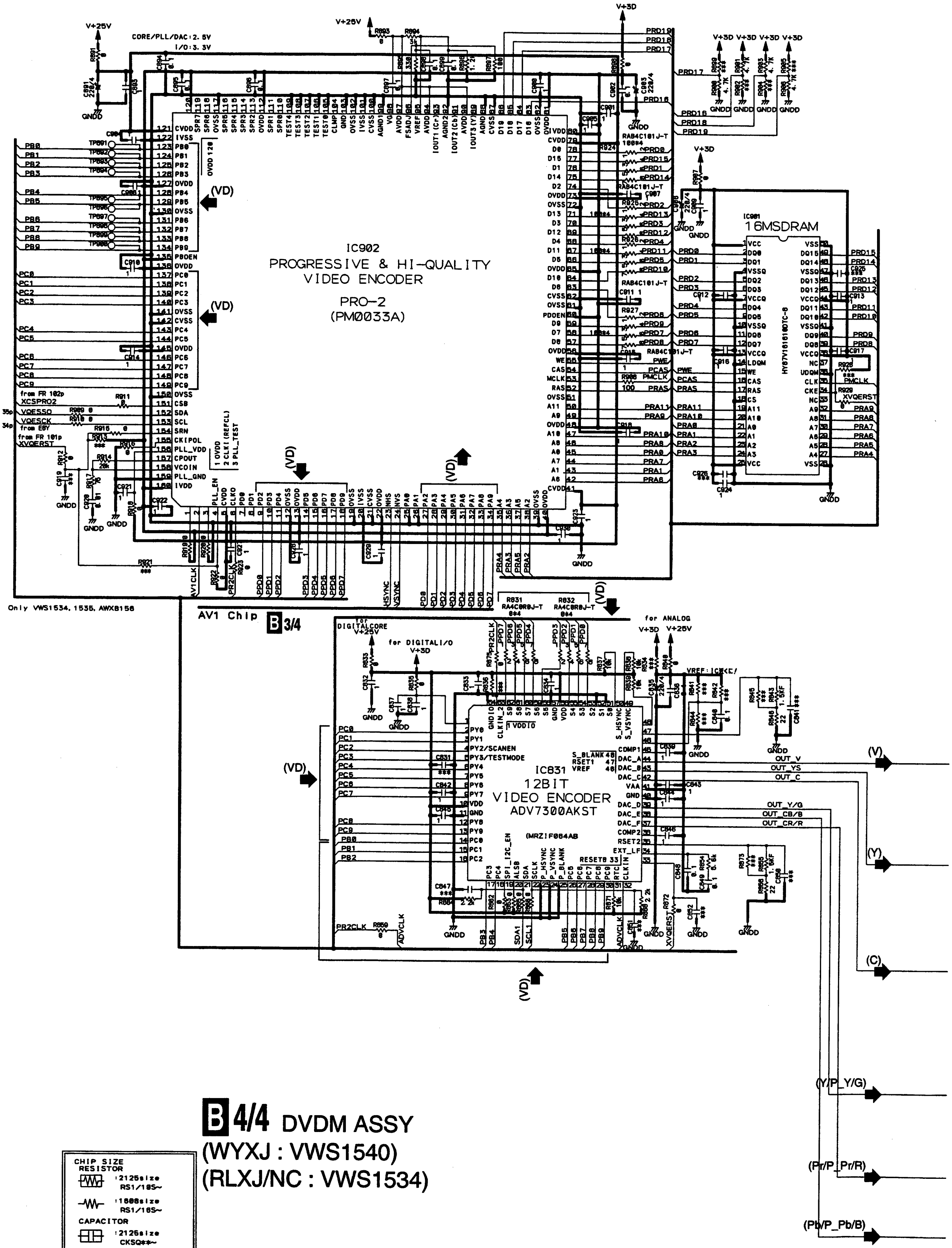
(P_Y) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Y]

(P_Pb) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pb]

(P_Pr) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pr]

B 3/4

3.6 DVDM ASSY 4/4 [VENC BLOCK]


V+25V
CORE/PLL/DAC:2.5V
I/O:3.3V
V+3D
GNDD
IC902
PROGRESSIVE & HI-QUALITY
VIDEO ENCODER
PRO-2
(PM0033A)
(VD)
IC901
16MSDRAM
HY57V161610DTC-8
PRD0
PRD1
PRD2
PRD3
PRD4
PRD5
PRD6
PRD7
PRD8
PRD9
PRD10
PRD11
PRD12
PRD13
PRD14
PRD15
PRD16
PRD17
PRD18
PRD19
PRA0
PRA1
PRA2
PRA3
PRA4
PRA5
PRA6
PRA7
PRA8
PRA9
PRA10
PRA11
PWE
PCAS
PRAS
PMCLK
XVQERST
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
from FR 102p
XCSPRO2
VDESSO
VDESCK
from E8Y
from FR 101p
Only VWS1534, 1535, AWX8156
AV1 Chip
B 3/4
AV1CLK
PR2CLK
PPD0
PPD1
PPD2
PPD3
PPD4
PPD5
PPD6
PPD7
HSYNC
VSYNC
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PRA4
PRA3
PRA5
PRA2
for DIGITALCORE
V+25V
for DIGITALI/O
V+3D
for ANALOG
V+3D V+25V
IC831
12BIT
VIDEO ENCODER
ADV7300AKST
(MRZ1F064AB)
VREF:IC
OUT_V
OUT_YS
OUT_C
OUT_Y/G
OUT_CB/B
OUT_CR/R
ADVCLK
SDA1
SCL1
XVQERST
(V)
(Y)
(C)
(Y/P_Y/G)
(Pr/P_Pr/R)
(Pb/P_Pb/B)

B 4/4 DVDM ASSY
(WYXJ : VWS1540)
(RLXJ/NC : VWS1534)

CHIP SIZE
RESISTOR
:2125size RS1/10S~
:1608size RS1/16S~
CAPACITOR
:2125size CKSQ##~
:1608size CCSR##~or CKSR##~

B 4/4

(R) : R SIGNAL ROUTE
(G) : G SIGNAL ROUTE
(B) : B SIGNAL ROUTE
(VD) : VIDEO DATA SIGNAL ROUTE
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(Pb) : Pb SIGNAL ROUTE
(Pr) : Pr SIGNAL ROUTE
(P_Y) : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Y]
(P_Pb) : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pb]
(P_Pr) : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pr]
(D) : AUDIO (DIGITAL) SIGNAL ROUTE

	R550 R581 R582	R590	R592 ~ R599	R559 R560 R561	R551 R552 R553	IC552	C553 C554	C555	IC553	C556	R556	R565 R589 R588	R568 R554
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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VWS1534 VWS1540	***	0	47	***	22	O	0. 1	47p	O	1	***	***	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
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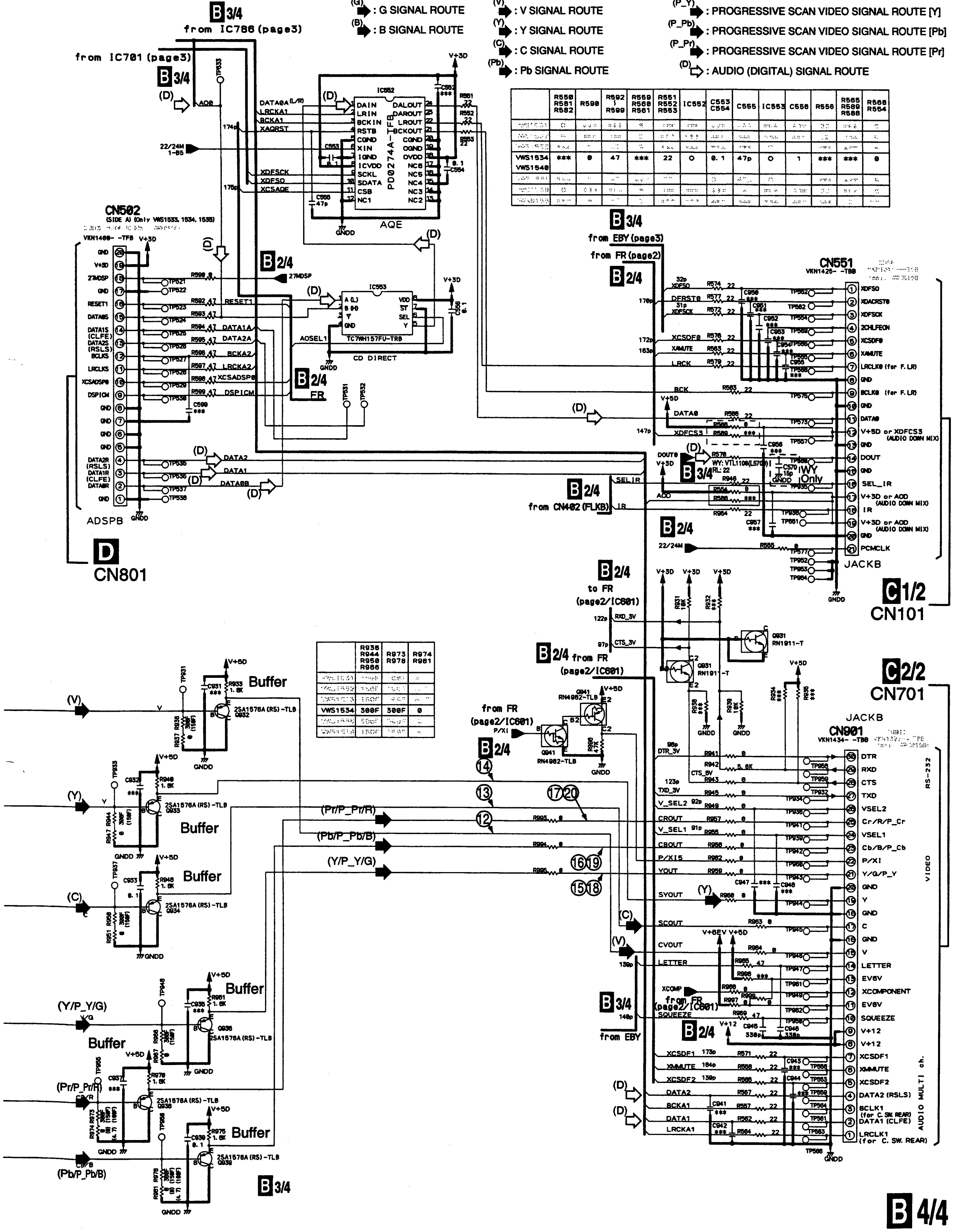
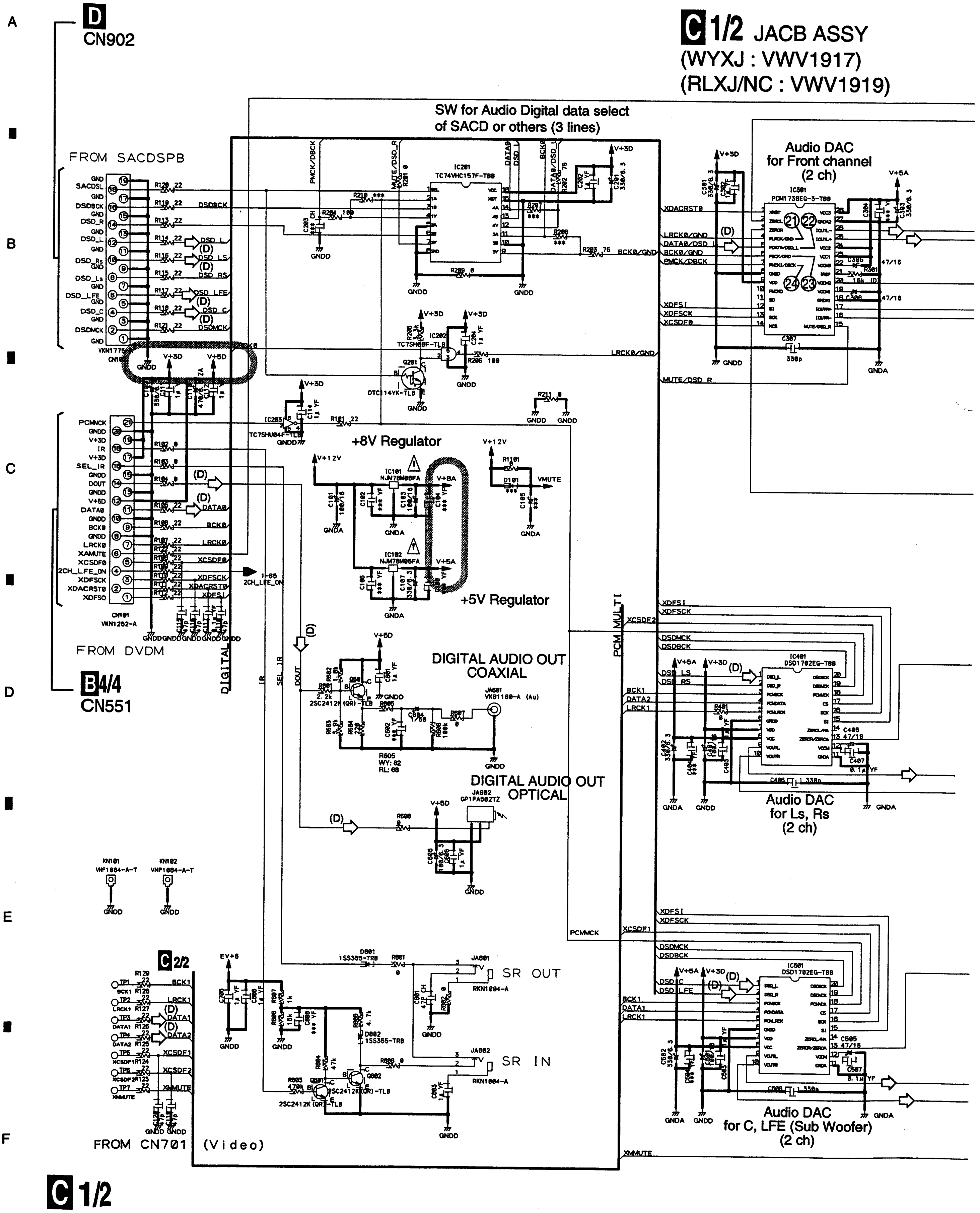
	R936 R944 R950 R966	R973 R978	R974 R981
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
VWS1534	300F	300F	0
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]



B 3/4 from IC786 (page3)
from IC701 (page3)
B 3/4
AO0
TP533
DATA0A (L/R)
LRCKA1
BCKA1
XAQRST
22/24M 1-85
174p
XDFSCK
XDFSO
XCSAQE
175p
IC552
PD0274A-TFB
DAIN DALOUT
LRIN DAROUT
BCKIN LROUT
RSTB BCKOUT
CGND CGND
XIN OGND
IGND OVDD
ICVDD NC6
SCKL NC5
SDATA NC4
CSB NC3
NC1 NC2
AQE
V+3D
C552 ***
R551 22
R552 22
R553 22
C553 0.1
C554 0.1
C555 47p
GNDD
CN502
(SIDE A) (Only VWS1533, 1534, 1535)
VKN1466- -TFB
V+3D
GND
V+3D
27MDSP
RESET1
DATA0S
DATA1S (CLFE)
DATA2S (RSLS)
BCLKS
LRCLKS
XCSADSP0
DSPICM
DATA2R (RSLS)
DATA1R (CLFE)
DATA0R
ADSPB
GNDD
D
CN801
B 2/4
27MDSP
R590 0
R592 47 RESET1
R593 47
R594 47 DATA1A
R595 47 DATA2A
R596 47 BCKA2
R597 47 LRCKA2
R598 47 XCSADSP0
R599 47 DSPICM
C599 ***
TP521 TP522 TP523 TP524 TP525 TP526 TP527 TP528 TP529 TP530
TP535 TP536 TP537 TP538
DATA2
DATA1
DATA0B
IC553
TC7WH157FU-TRB
A (L) VDD
B (H) ST
Y SEL
GND Y
V+3D
C556 0.1
AOSEL1
CD DIRECT
B 2/4 FR
TP531 TP532
B 3/4 from EBY (page3)
from FR (page2)
B 2/4
CN551
VKN1425- -TBB
32p XDFSO R574 22
DFRST0 R577 22
31p XDFSCK R572 22
170p
172p XCSDF0 R576 22
163p XAMUTE R583 22
LRCK R579 22
BCK R563 22
V+5D
DATA0 R586 22
R568 0
147p XDFCS3 R589 ***
DOUT0 V+3D
B 3/4 R578 WY: VTL1108 (L570) RL: 22
C570 15p
IWY Only
R946 22
R554 0
R588 ***
R964 22
B 2/4 from CN402 (FLKB)
SEL_IR
IR
AOD
C956 *** C957 ***
B 2/4 22/24M
R555 0
C958 *** C961 *** C962 *** C963 *** C954 *** C955 ***
TP562 TP564 TP569 TP566 TP565 TP568 TP576 TP575 TP557 TP936 TP935 TP938 TP561 TP577 TP952 TP953 TP954
1 XDFSO
2 XDACRST0
3 XDFSCK
4 2CHLFEON
5 XCSDF0
6 XAMUTE
7 LRCLK0 (for F. LR)
8 GND
9 BCLK0 (for F. LR)
10 GND
11 DATA0
12 V+5D or XDFCS3 (AUDIO DOWN MIX)
13 GND
14 DOUT
15 GND
16 SEL_IR
17 V+3D or AOD (AUDIO DOWN MIX)
18 IR
19 V+3D or AOD (AUDIO DOWN MIX)
20 GND
21 PCMCLK
JACKB
GNDD
C 1/2
CN101
B 2/4 to FR (page2/IC601)
V+3D V+3D V+3D
R931 10K
R932 ***
122p RXD_3V
97p CTS_3V
Q931 RN1911-T
B 2/4 from FR (page2/IC601)
V+5D
R934 *** R935 ***
R938 *** R939 10K
GNDD
C 2/2
CN701
JACKB
CN901
VKN1434- -TBB
from FR (page2/IC601)
P/XI
Q941 RN4982-TLB
R980 4.7K
B 2/4
GNDD
96p DTR_3V R941 0
R942 5.6K
CTS_5V R943 0
123p TXD_3V R945 0
V_SEL2 92p R949 0
CROUT R957 0
V_SEL1 91p R955 0
CBOUT R956 0
P/XI5 R962 0
YOUT R959 0
SYOUT R960 0
SCOUT R963 0
CVOUT
LETTER R965 47
R966 ***
V+6EV V+5D
XCOMP R968 0
R967 0
R969 0
139p
B 3/4 148p SQUEEZE R969 47
from EBY
B 2/4 V+12
C945 330p C946 330p
C947 *** C948 ***
XCSDF1 173p R571 22
XMMUTE 184p R558 22
XCSDF2 139p R585 22
DATA2 R587 22
BCKA1 R557 22
DATA1 R582 22
LRCKA1 R584 22
C941 *** C942 *** C943 *** C944 ***
TP956 TP959 TP932 TP934 TP939 TP941 TP940 TP942 TP960 TP943 TP944 TP945 TP946 TP947 TP961 TP949 TP962 TP950 TP565 TP563 TP559 TP564 TP561 TP563 TP566
30 DTR
29 RXD
28 CTS
27 TXD
26 VSEL2
25 Cr/R/P_Cr
24 VSEL1
23 Cb/B/P_Cb
22 P/XI
21 Y/G/P_Y
20 GND
19 Y
18 GND
17 C
16 GND
15 V
14 LETTER
13 EV6V
12 XCOMPONENT
11 EV6V
10 SQUEEZE
9 V+12
8 V+12
7 XCSDF1
6 XMMUTE
5 XCSDF2
4 DATA2 (RSLS)
3 BCLK1 (for C. SW. REAR)
2 DATA1 (CLFE)
1 LRCLK1 (for C. SW. REAR)
RS-232
VIDEO
AUDIO MULTI ch.
GNDD
(V) V
TP931
C931 ***
R933 1.5K
Buffer
R936 300F (150F)
R937 0
2SA1576A (RS)-TLB Q932
GNDD
(Y) Y
TP933
C932 ***
R948 1.5K
R944 300F (150F)
R947 0
2SA1576A (RS)-TLB Q933
Buffer
(C) C
TP937
C933 0.1
R946 1.5K
R950 300F (150F)
R951 0
2SA1576A (RS)-TLB Q934
Buffer
(Y/P_Y/G) Y/G
TP948
C935 ***
R961 1.5K
R966 300F (150F)
R967 0
Q935 2SA1576A (RS)-TLB
Buffer
(Pr/P_Pr/R) Cr/R
TP955
C937 ***
R970 1.5K
R973 300F (150F)
R974 (4.7) 0
2SA1576A (RS)-TLB Q936
Buffer
(Pb/P_Pb/B) Cb/B
TP956
C939 0.1
R976 1.5K
R978 300F (150F)
R981 (4.7) 0
2SA1576A (RS)-TLB Q939
Buffer
V+5D
GNDD
B 3/4
(Pr/P_Pr/R)
(Pb/P_Pb/B)
(Y/P_Y/G)
R993 0
R994 0
R995 0
⑭ ⑬ ⑫ ⑰⑳ ⑯⑲ ⑮⑱
(Y) (C) (V)

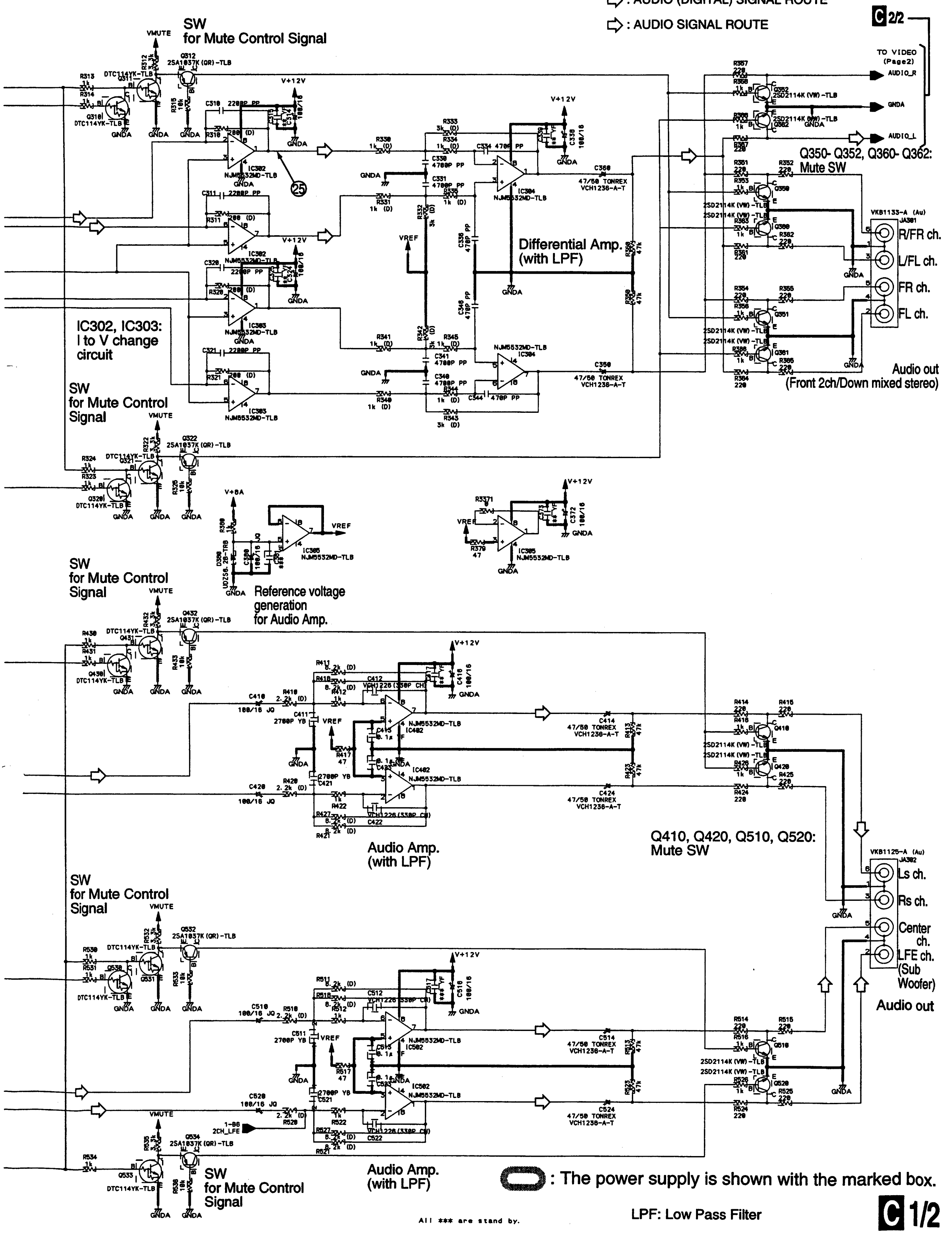
B 4/4

3.7 JACB ASSY 1/2 [AUDIO BLOCK]


A
B
C
D
E
F
D CN902
C 1/2 JACB ASSY
(WYXJ : VWV1917)
(RLXJ/NC : VWV1919)
SW for Audio Digital data select of SACD or others (3 lines)
FROM SACDSPB
IC201 TC74VHC157F-TBB
IC301 PCM1738EQ-3-TBB
Audio DAC for Front channel (2 ch)
IC202 TC7SH08F-TLB
Q201 DTC114YK-TLB
IC203 TC7SHU04F-TLB
+8V Regulator
IC101 NJM78M08FA
IC102 NJM78M05FA
+5V Regulator
D101
VMUTE
FROM DVDM
B 4/4 CN551
CN101 VKN1252-A
DIGITAL
IR
SEL_IR
DOUT
PCM MULTI
DIGITAL AUDIO OUT COAXIAL
JA601 VKB1160-A (Au)
DIGITAL AUDIO OUT OPTICAL
JA602 GP1FA502TZ
IC401 DSD1702EG-TBB
Audio DAC for Ls, Rs (2 ch)
KN101 VNF1084-A-T
KN102 VNF1084-A-T
C 2/2
FROM CN701 (Video)
SR OUT
JA801 RKN1004-A
SR IN
JA802 RKN1004-A
D801 1SS355-TRB
D802 1SS355-TRB
Q801 2SC2412K (QR)-TLB
Q802 2SC2412K (QR)-TLB
IC501 DSD1702EG-TBB
Audio DAC for C, LFE (Sub Woofer) (2 ch)
XMMUTE
C 1/2

(D) : AUDIO (DIGITAL) SIGNAL ROUTE

: AUDIO SIGNAL ROUTE


C 2/2
TO VIDEO (Page2)
AUDIO_R
GNDA
AUDIO_L
SW for Mute Control Signal
VMUTE
Q312 2SA1037K (QR)-TLB
DTC114YK-TLB
V+12V
IC302 NJM5532MD-TLB
25
Differential Amp. (with LPF)
IC304 NJM5532MD-TLB
C350 47/50 TONREX VCH1236-A-T
Q350- Q352, Q360- Q362: Mute SW
2SD2114K (VW)-TLB
VKB1133-A (Au) JA301
R/FR ch.
L/FL ch.
FR ch.
FL ch.
Audio out (Front 2ch/Down mixed stereo)
IC302, IC303: I to V change circuit
IC303 NJM5532MD-TLB
VREF
V+8A
D300 UDZS6.2B-TRB
IC305 NJM5532MD-TLB
Reference voltage generation for Audio Amp.
Q432 2SA1037K (QR)-TLB
IC402 NJM5532MD-TLB
Audio Amp. (with LPF)
Q410, Q420, Q510, Q520: Mute SW
VKB1125-A (Au) JA302
Ls ch.
Rs ch.
Center ch.
LFE ch. (Sub Woofer)
Audio out
Q532 2SA1037K (QR)-TLB
IC502 NJM5532MD-TLB
1-86 2CH_LFE
Q534 2SA1037K (QR)-TLB
SW for Mute Control Signal
Audio Amp. (with LPF)

: The power supply is shown with the marked box.

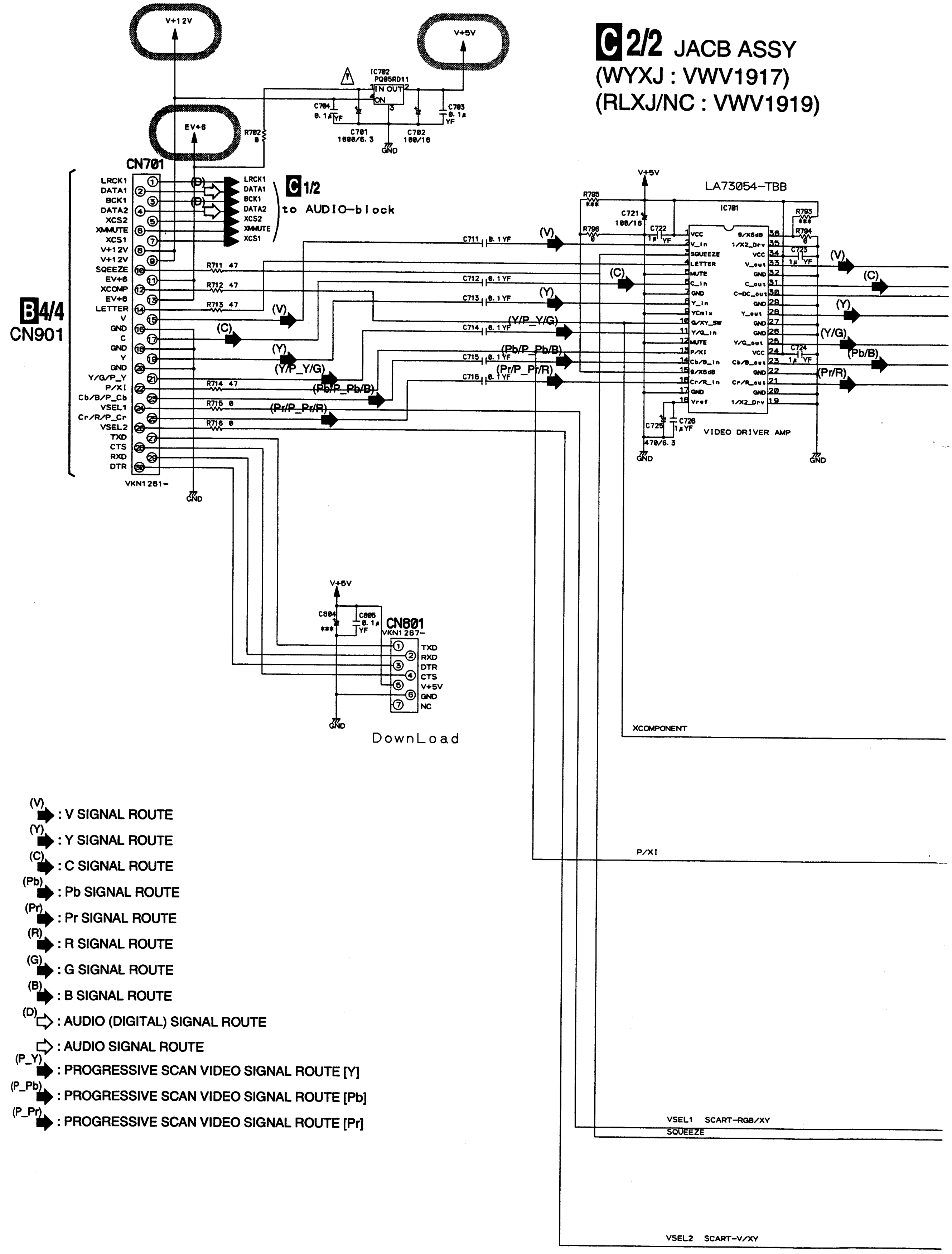
All *** are stand by.

LPF: Low Pass Filter

C 1/2

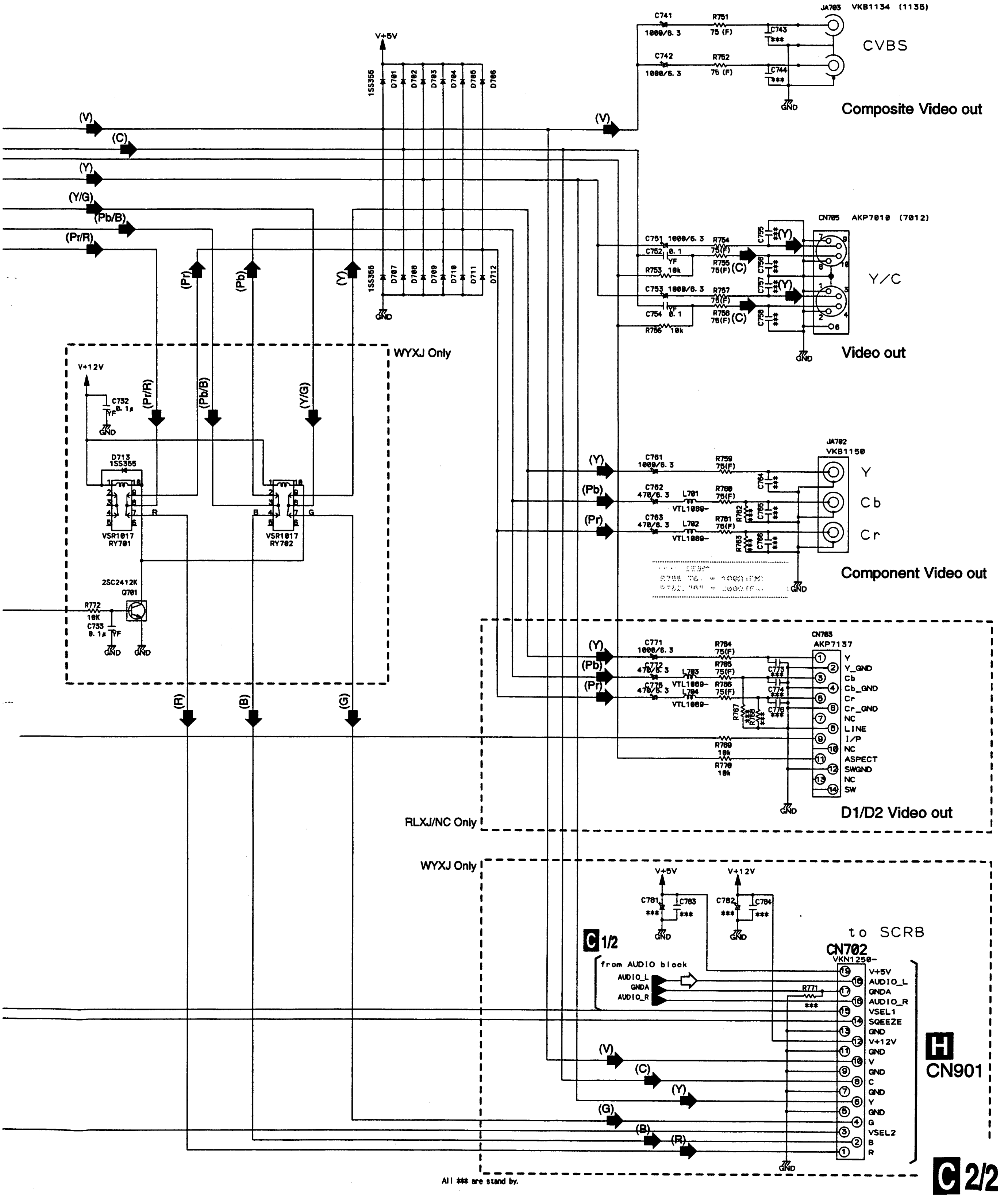
3.8 JACB ASSY 2/2 [VIDEO BLOCK]

C 2/2 JACB ASSY
(WYXJ : VWV1917)
(RLXJ/NC : VWV1919)


V+12V
V+5V
EV+6
IC702
PQ05RD11
IN OUT
ON
C704 0.1μ YF
C701 1000/6.3
C702 100/16
C703 0.1μ YF
R702 0
GND
CN701
LRCK1
DATA1
BCK1
DATA2
XCS2
XMMUTE
XCS1
V+12V
V+12V
SQEEZE
EV+6
XCOMP
EV+6
LETTER
V
GND
C
GND
Y
GND
Y/G/P_Y
P/XI
Cb/B/P_Cb
VSEL1
Cr/R/P_Cr
VSEL2
TXD
CTS
RXD
DTR
VKN1261-
B 4/4
CN901
(D)
C 1/2
to AUDIO-block
R711 47
R712 47
R713 47
R714 47
R715 0
R716 0
(V)
(C)
(Y)
(Y/P_Y/G)
(Pb/P_Pb/B)
(Pr/P_Pr/R)
C711 0.1 YF
C712 0.1 YF
C713 0.1 YF
C714 0.1 YF
C715 0.1 YF
C716 0.1 YF
V+5V
LA73054-TBB
IC701
R795 ***
R796 0
C721 100/16
C722 1μ YF
R793 ***
R794 0
C723 1μ YF
C724 1μ YF
C725 470/6.3
C726 1μ YF
VCC
V_in
SQUEEZE
LETTER
MUTE
C_in
GND
Y_in
YCmix
G/XY_SW
Y/G_in
MUTE
P/XI
Cb/B_in
0/X6dB
Cr/R_in
GND
Vref
0/X6dB
1/X2_Drv
VCC
V_out
GND
C_out
C-DC_out
GND
Y_out
GND
GND
Y/G_out
VCC
Cb/B_out
GND
Cr/R_out
GND
1/X2_Drv
(Y/G)
(Pb/B)
(Pr/R)
VIDEO DRIVER AMP
V+5V
C804 ***
C805 0.1μ YF
CN801
VKN1267-
TXD
RXD
DTR
CTS
V+5V
GND
NC
DownLoad
XCOMPONENT
P/XI
VSEL1 SCART-RGB/XY
SQUEEZE
VSEL2 SCART-V/XY

(V) ➡ : V SIGNAL ROUTE
(Y) ➡ : Y SIGNAL ROUTE
(C) ➡ : C SIGNAL ROUTE
(Pb) ➡ : Pb SIGNAL ROUTE
(Pr) ➡ : Pr SIGNAL ROUTE
(R) ➡ : R SIGNAL ROUTE
(G) ➡ : G SIGNAL ROUTE
(B) ➡ : B SIGNAL ROUTE
(D) ⇨ : AUDIO (DIGITAL) SIGNAL ROUTE
⇨ : AUDIO SIGNAL ROUTE
(P_Y) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Y]
(P_Pb) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pb]
(P_Pr) ➡ : PROGRESSIVE SCAN VIDEO SIGNAL ROUTE [Pr]

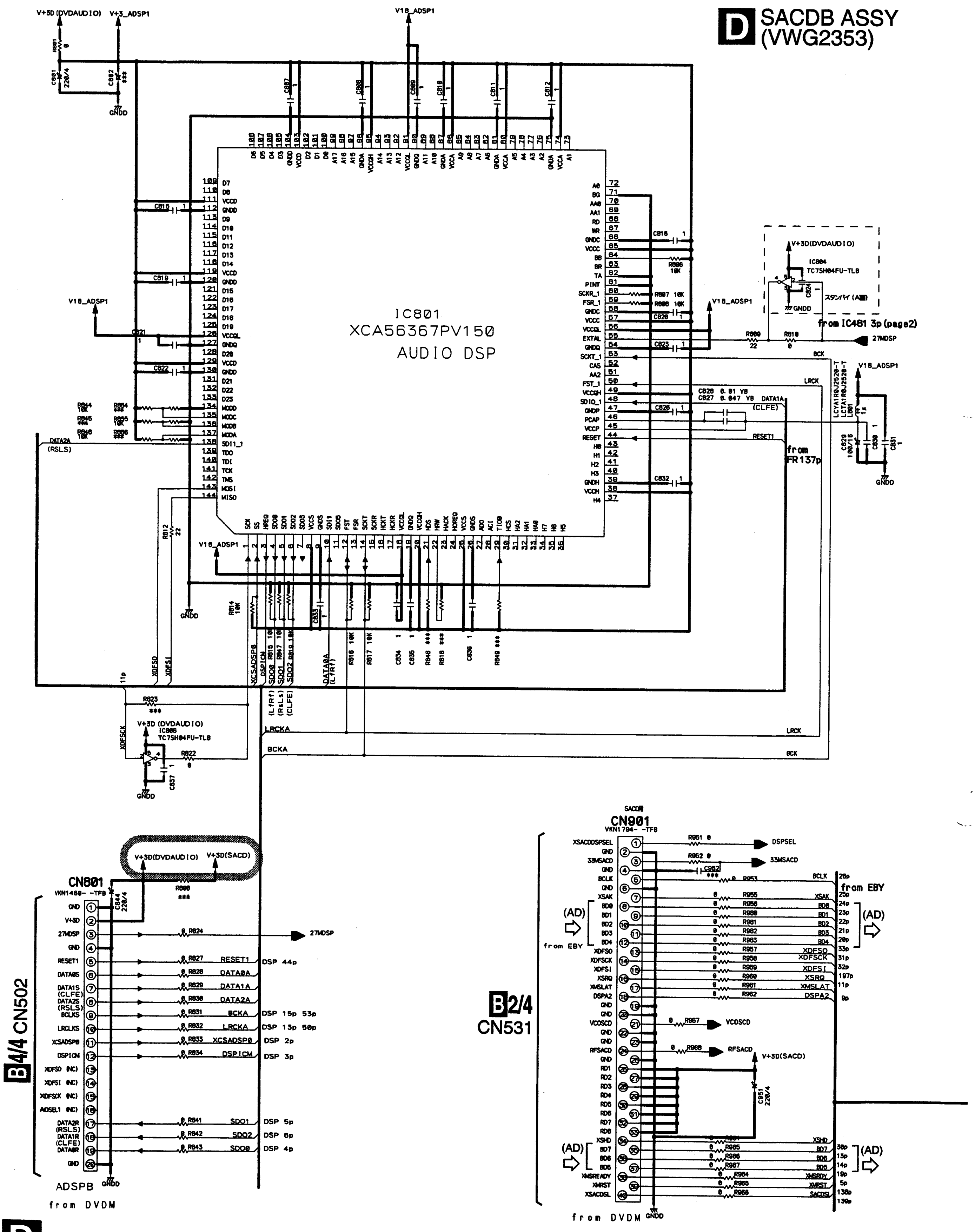
⬭ : The power supply is shown with the marked box.


JA703 VKB1134 (1135)
C741 1000/6.3
C742 1000/6.3
R751 75 (F)
R752 75 (F)
C743 ###
C744 ###
CVBS
Composite Video out
V+5V
1SS355
D701 D702 D703 D704 D705 D706
D707 D708 D709 D710 D711 D712
(V)
(C)
(Y)
(Y/G)
(Pb/B)
(Pr/R)
(Pr)
(Pb)
(Y)
CN705 AKP7010 (7012)
C751 1000/6.3
C752 0.1 YF
R753 10k
C753 1000/6.3
C754 0.1 YF
R756 10k
R754 75(F)
R755 75(F)
R757 75(F)
R758 75(F)
C755 C756 C757 C758 ###
Y/C
Video out
WYXJ Only
V+12V
C732 0.1μ YF
D713 1SS355
VSR1017 RY701
VSR1017 RY702
2SC2412K Q701
R772 10K
C733 0.1μ YF
(Pr/R)
(Pb/B)
(Y/G)
(R)
(B)
(G)
GND
JA702 VKB1150
C761 1000/6.3
C762 470/6.3
C763 470/6.3
L701 VTL1009-
L702 VTL1009-
R759 75(F)
R760 75(F)
R761 75(F)
R762 R763
C764 C765 C766 ###
Y
Cb
Cr
Component Video out
RLXJ/NC Only
CN703 AKP7137
C771 1000/6.3
C772 470/6.3
C775 470/6.3
L703 VTL1009-
L704 VTL1009-
R764 75(F)
R765 75(F)
R766 75(F)
R767 R768
C773 C774 C776 ###
R769 10k
R770 10k
Y
Y_GND
Cb
Cb_GND
Cr
Cr_GND
NC
LINE
I/P
NC
ASPECT
SWGND
NC
SW
D1/D2 Video out
WYXJ Only
V+5V
V+12V
C781 ###
C783 ###
C782 ###
C784 ###
C 1/2
from AUDIO block
AUDIO_L
GNDA
AUDIO_R
R771 ###
to SCRB
CN702
VKN1250-
V+5V
AUDIO_L
GNDA
AUDIO_R
VSEL1
SQEEZE
GND
V+12V
GND
V
GND
C
GND
Y
GND
G
VSEL2
B
R
H
CN901

All ### are stand by.

C 2/2

3.9 SACDB ASSY


D SACDB ASSY (VWG2353)
IC801
XCA56367PV150
AUDIO DSP
V+3D(DVDAUDIO)
V+3_ADSP1
V18_ADSP1
GNDD
IC804
TC7SH04FU-TLB
from IC481 3p (page2)
27MDSP
BCK
LRCK
DATA1A (CLFE)
RESET1
from FR137p
DATA2A (RSLS)
XDFSO
XDFSI
XDFSCK
IC806
TC7SH04FU-TLB
XCSADSP0
DSPICM
SDO0 (LFRF)
SDO1 (RLs)
SDO2 (CLFE)
DATA0A (LFRF)
LRCKA
BCKA
V+3D(DVDAUDIO) V+3D(SACD)
CN801
VKN1468- -TFB
GND
V+3D
27MDSP
RESET1
DATA0S
DATA1S (CLFE)
DATA2S (RSLS)
BCLKS
LRCLKS
XCSADSP0
DSPICM
XDFSO (NC)
XDFSI (NC)
XDFSCK (NC)
ADSEL1 (NC)
DATA2R (RSLS)
DATA1R (CLFE)
DATA0R
DSP 44p
DSP 15p 53p
DSP 13p 50p
DSP 2p
DSP 3p
DSP 5p
DSP 6p
DSP 4p
B 4/4 CN502
ADSPB
from DVDM
SACD用
CN901
VKN1794- -TFB
XSACDDSPSEL
33MSACD
BCLK
XSAK
BD0
BD1
BD2
BD3
BD4
XDFSO
XDFSCK
XDFSI
XSRQ
XMSLAT
DSPA2
VCOSCD
RFSACD
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
XSHD
BD7
BD6
BD5
XMSREADY
XMRST
XSACDSL
DSPSEL
33MSACD
VCOSCD
RFSACD
V+3D(SACD)
(AD)
from EBY
B 2/4
CN531
from DVDM

A

: The power supply is shown with the marked box.

(AD) : AUDIO DATA SIGNAL ROUTE

(D) : AUDIO (DIGITAL) SIGNAL ROUTE

Note
1608
1608

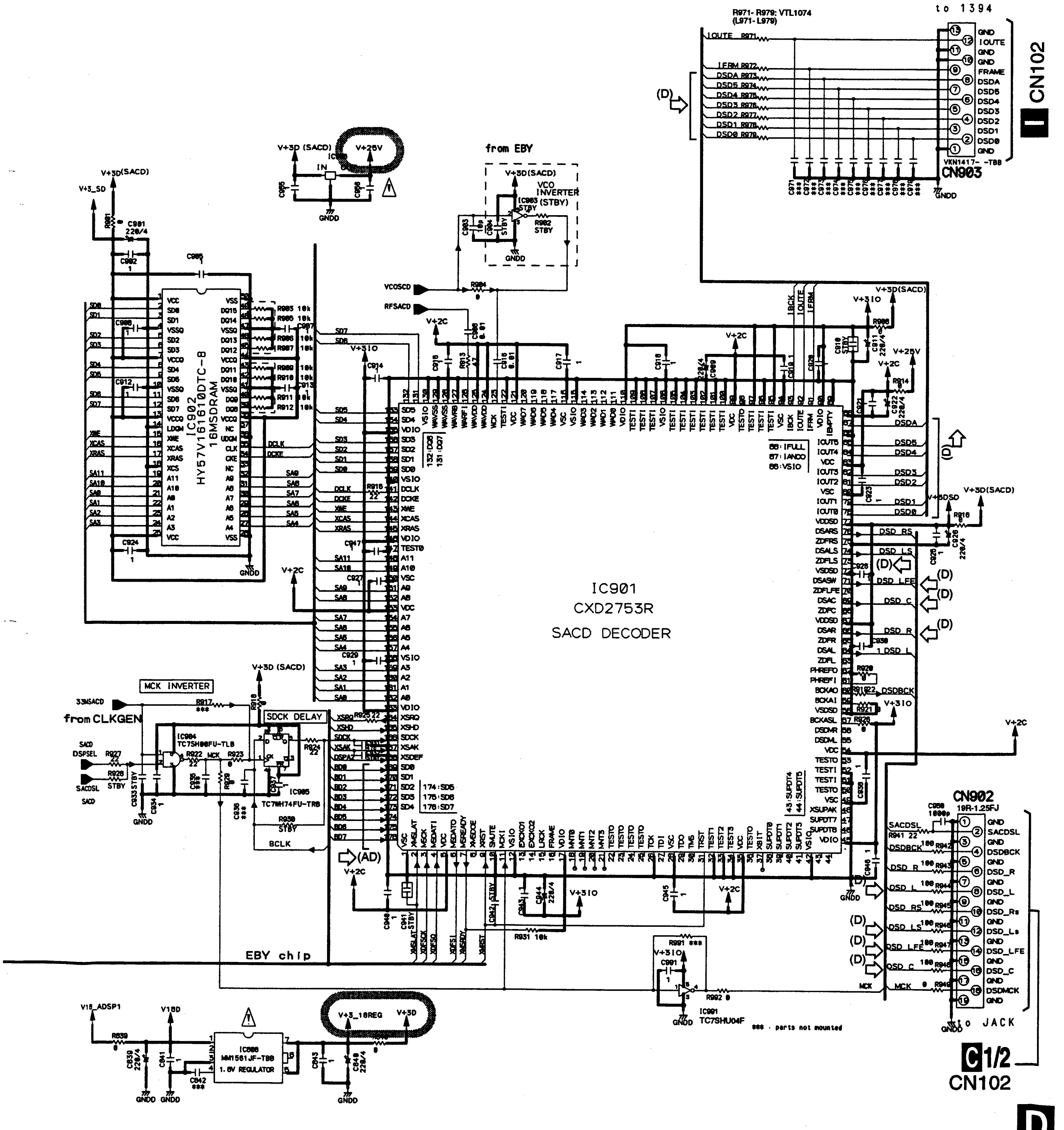
B

C

D

E

F

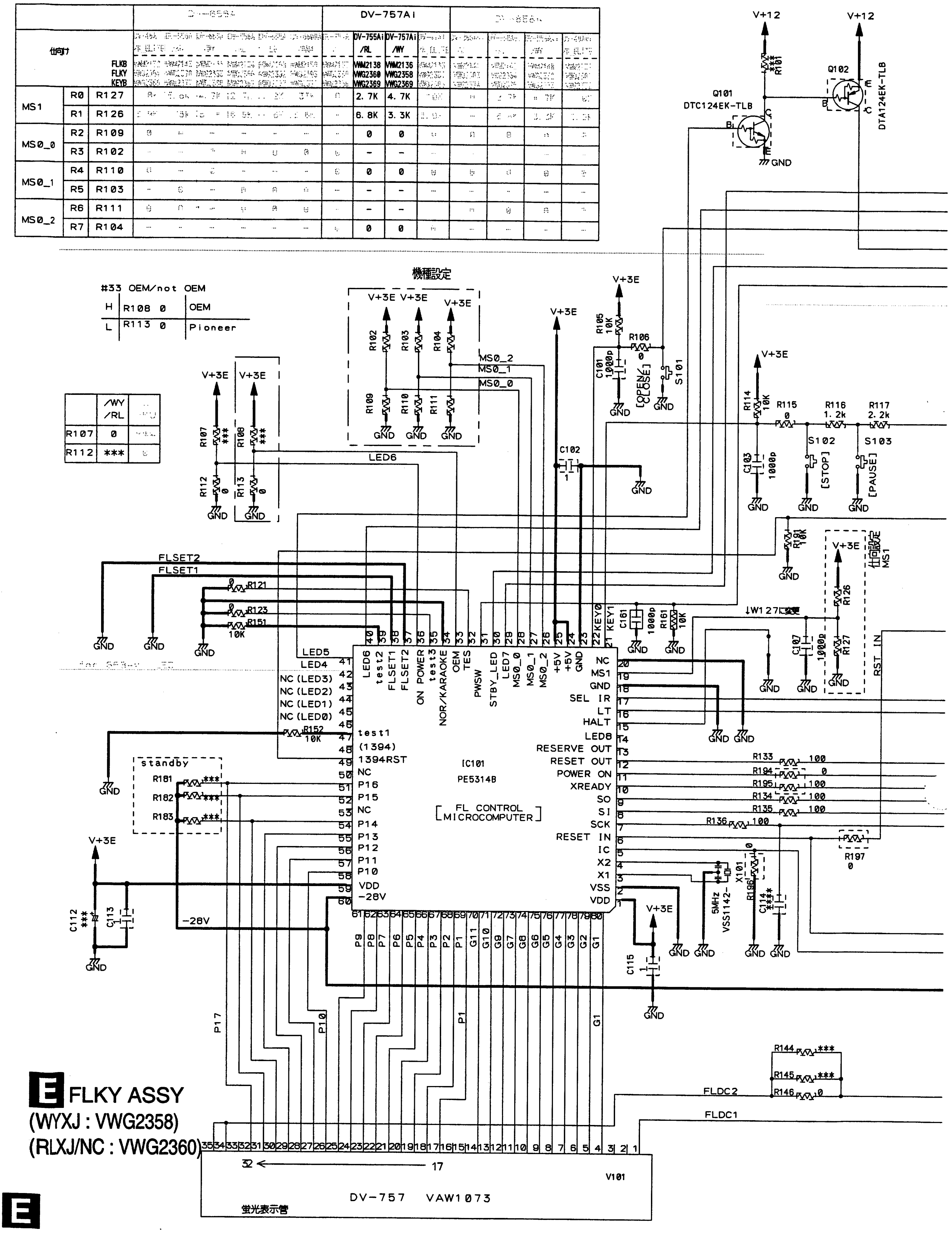

R971- R979: VTL1074
(L971- L979)
to 1394
IOUTE
IFRM
DSDA
DSD5
DSD4
DSD3
DSD2
DSD1
DSD0
GND
FRAME
VKN1417- -T88
CN903
CN102
GNDD
V+3D (SACD)
V+25V
IN
OUT
from EBY
VCO INVERTER (STBY)
IC903
STBY
R902
VCOSCD
RFSACD
R904
V+3_SD
V+3D(SACD)
IC902
HY57V161610DTC-8
16MSDRAM
IC901
CXD2753R
SACD DECODER
V+3IO
V+2C
88: IFULL
87: IANDO
86: VSIO
132: D06
131: D07
174: SD6
175: SD6
176: SD7
43: SUPDT4
44: SUPDT5
DSD RS
DSD LS
DSD LFE
DSD C
DSD R
DSD L
DSDBCK
MCK INVERTER
33MSACD
from CLKGEN
SACD DSPSEL
SACDSL
IC904
TC7SH08FU-TLB
SDCK DELAY
IC905
TC7WH74FU-TRB
BCLK
EBY chip
(AD)
(D)
CN902
19R-1.25FJ
SACDSL
DSDBCK
DSD_R
DSD_L
DSD_Rs
DSD_Ls
DSD_LFE
DSD_C
DSDMCK
MCK
to JACK
IC991
TC7SHU04F
R992
*** : parts not mounted
V18_ADSP1
V18D
IC906
MM1561JF-T88
1.8V REGULATOR
V+3_18REG
V+3D
GNDD

C 1/2
CN102

D

3.10 FLKY, KEYB and MSWB ASSYS

			[illegible]						DV-757AI				[illegible]			
仕向け		FLKB FLKY KEYB	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	DV-755Ai /RL VWM2138 VWG2360 VWG2369	DV-757Ai /WY VWM2136 VWG2358 VWG2369	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MS1	R0	R127	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.7K	4.7K	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	R1	R126	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.8K	3.3K	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MS0_0	R2	R109	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	R3	R102	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	[illegible]	[illegible]		[illegible]	[illegible]
MS0_1	R4	R110	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	R5	R103	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MS0_2	R6	R111	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–		[illegible]	[illegible]	[illegible]	[illegible]
	R7	R104	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

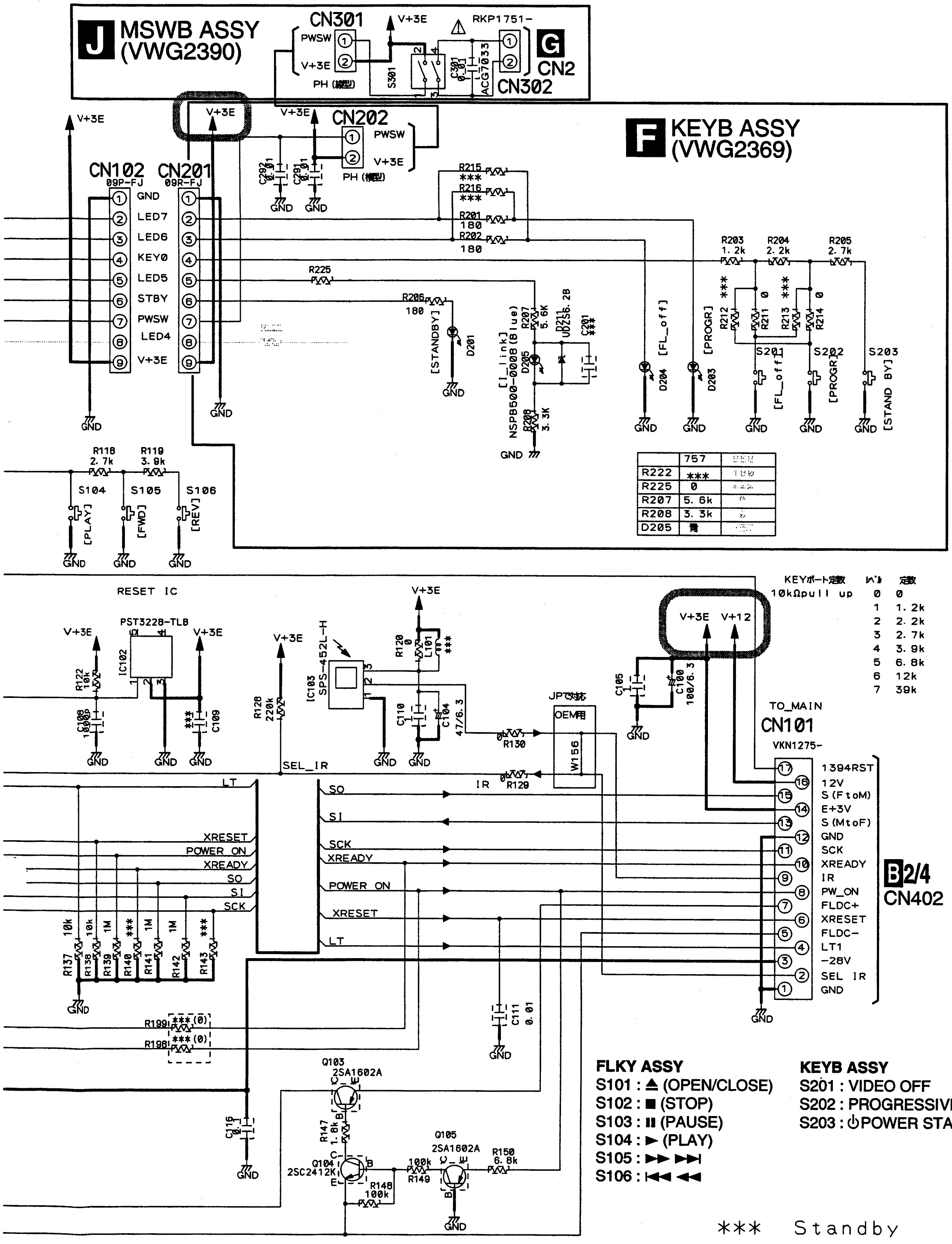

A
B
C
D
E
F
V+12
V+12
R101 ***
Q101
DTC124EK-TLB
Q102
DTA124EK-TLB
GND
機種設定
V+3E
R102
R103
R104
R109
R110
R111
MS0_2
MS0_1
MS0_0
R105 10K
R106 0
C101 1000p
S101
[OPEN/CLOSE]
R107 ***
R108 ***
R112 0
R113 0
LED6
C102
R114 10K
R115 0
R116 1.2k
R117 2.2k
C103 1000p
S102 [STOP]
S103 [PAUSE]
R191 10K
仕向設定 MS1
R126
R127
C107 1000p
W127に変更
FLSET2
FLSET1
R121
R123
R151 10K
LED5
LED4
NC (LED3)
NC (LED2)
NC (LED1)
NC (LED0)
R152 10K
standby
R181 ***
R182 ***
R183 ***
C112 ***
C113
-28V
C161 1000p
R161 10K
KEY0
KEY1
IC101
PE5314B
[FL CONTROL MICROCOMPUTER]
test1
(1394)
1394RST
NC
P16
P15
P14
P13
P12
P11
P10
VDD
-28V
LED6
test2
FLSET1
FLSET2
ON POWER
test3
OEM
TES
PWSW
STBY_LED
LED7
MS0_0
MS0_1
MS0_2
+5V
GND
NOR/KARAOKE
MS1
SEL IR
LT
HALT
LED8
RESERVE OUT
RESET OUT
POWER ON
XREADY
SO
SI
SCK
RESET IN
IC
X2
X1
VSS
R133 100
R194 0
R195 100
R134 100
R135 100
R136 100
R197 0
R196 0
X101 5MHz VSS1142-
C114 ***
C115
RST IN
P9 P8 P7 P6 P5 P4 P3 P2 P1
G11 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1
P17
P10
P1
G1
R144 ***
R145 ***
R146 0
FLDC2
FLDC1
32 ← 17
V101
DV-757 VAW1073
蛍光表示管

#33 OEM/not OEM		
H	R108 0	OEM
L	R113 0	Pioneer

	/WY /RL	[illegible]
R107	0	[illegible]
R112	***	[illegible]

E FLKY ASSY
(WYXJ : VWG2358)
(RLXJ/NC : VWG2360)

E


J MSWB ASSY
(VWG2390)
CN301
PWSW
V+3E
PH (縦型)
S301
V+3E
RKP1751-
C301
0.01
ACG7033
G CN2
CN302
F KEYB ASSY
(VWG2369)
CN202
PWSW
V+3E
PH (縦型)
C292 0.01
C291 0.01
CN102 09P-FJ
CN201 09R-FJ
GND
LED7
LED6
KEY0
LED5
STBY
PWSW
LED4
V+3E
R215 ***
R216 ***
R201 180
R202 180
R225
R206 180
[STANDBY]
D201
R207 5.6K
D211 UDZS6.2B
C201 ***
[I_link] NSPB500-0008(Blue)
D205
R208 3.3K
[FL_off]
D204
[PROGR]
D203
R203 1.2k
R204 2.2k
R205 2.7k
R212 ***
R211 0
R213 ***
R214 0
S201 [FL_off]
S202 [PROGR]
S203 [STAND BY]
GND
R118 2.7k
R119 3.9k
S104 [PLAY]
S105 [FWD]
S106 [REV]
RESET IC
PST3228-TLB
IC102
R122 10k
C108 1000p
C109 ***
V+3E
R128 220k
SEL_IR
IC103 SPS-452L-H
R120 0
L101 ***
C110 0.1
C104 47/6.3
R130
JP切換
OEM用
W156
R129
IR
C105 1
C100 100/6.3
V+3E V+12
TO_MAIN
CN101
VKN1275-
1394RST
12V
S(FtoM)
E+3V
S(MtoF)
GND
SCK
XREADY
IR
PW_ON
FLDC+
XRESET
FLDC-
LT1
-28V
SEL IR
GND
B 2/4
CN402
LT
XRESET
POWER ON
XREADY
SO
SI
SCK
R137 10k
R138 10k
R139 1M
R140 ***
R141 1M
R142 1M
R143 ***
R199 ***(0)
R198 ***(0)
C111 0.01
C116 0.1
Q103 2SA1602A
R147 1.8k
Q104 2SC2412K
R148 100k
R149 100k
Q105 2SA1602A
R150 6.8k

	757	
R222	***	[illegible]
R225	0	[illegible]
R207	5.6k	[illegible]
R208	3.3k	[illegible]
D205	青	[illegible]

KEYポート定数	レベル	定数
10kΩpull up	0	0
	1	1.2k
	2	2.2k
	3	2.7k
	4	3.9k
	5	6.8k
	6	12k
	7	39k

FLKY ASSY
S101 : ▲ (OPEN/CLOSE)
S102 : ■ (STOP)
S103 : ▮▮ (PAUSE)
S104 : ▶ (PLAY)
S105 : ▶▶ ▶▶|
S106 : |◀◀ ◀◀

KEYB ASSY
S201 : VIDEO OFF
S202 : PROGRESSIVE
S203 : ⏻POWER STANDBY/ON

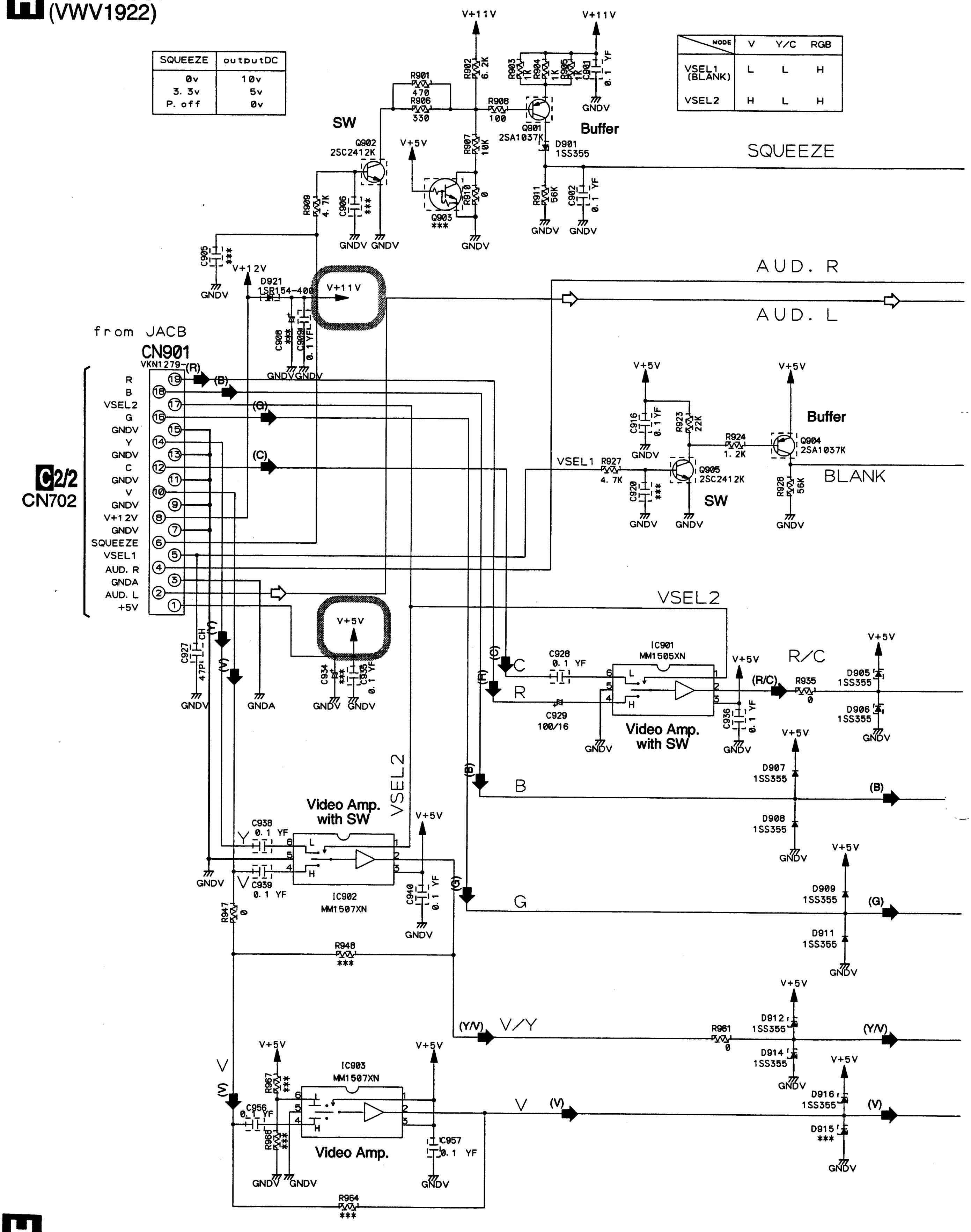
*** Standby

⬭ : The power supply is shown with the marked box.

E F J

3.11 SCRB ASSY [WYXJ Type Only]

H SCRB ASSY
(VWV1922)



SQUEEZE	outputDC
0v	10v
3.3v	5v
P. off	0v

MODE	V	Y/C	RGB
VSEL1 (BLANK)	L	L	H
VSEL2	H	L	H

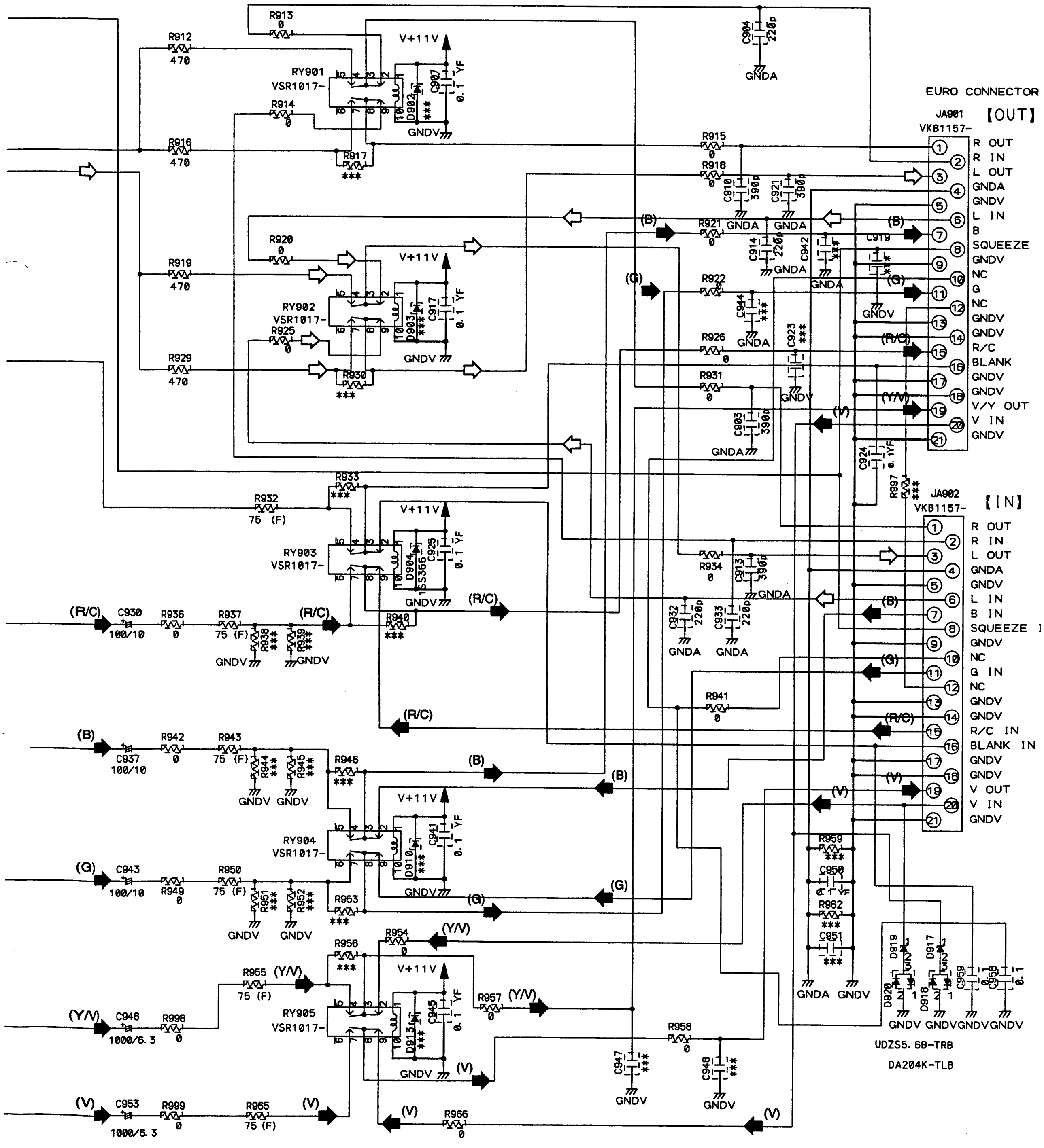
V+11V
R901 470
R906 330
R902 6.2K
R903 1K
R904 1K
R905 1K
C901 0.1 YF
R908 100
Q901 2SA1037K
Buffer
GNDV
SW
Q902 2SC2412K
V+5V
R907 10K
D901 1SS355
SQUEEZE
R909 4.7K
C906 ***
Q903 ***
R910 0
R911 56K
C902 0.1 YF
C905 ***
V+12V
D921 1SR154-400
C908 ***
C909 0.1 YF
AUD. R
AUD. L
from JACB
CN901
VKN1279-
R
B
VSEL2
G
GNDV
Y
GNDV
C
GNDV
V
GNDV
V+12V
GNDV
SQUEEZE
VSEL1
AUD. R
GNDA
AUD. L
+5V
C 2/2
CN702
(R)
(B)
(G)
(C)
C916 0.1 YF
R923 22K
R924 1.2K
Q904 2SA1037K
Buffer
VSEL1
R927 4.7K
Q905 2SC2412K
C920 ***
SW
R928 56K
BLANK
VSEL2
C927 47P CH
GNDA
C934 ***
C935 0.1 YF
IC901 MM1505XN
C928 0.1 YF
C929 100/16
C936 0.1 YF
Video Amp. with SW
R/C
(R/C)
R935 0
D905 1SS355
D906 1SS355
D907 1SS355
D908 1SS355
(B)
Video Amp. with SW
C938 0.1 YF
C939 0.1 YF
IC902 MM1507XN
C940 0.1 YF
R947 0
D909 1SS355
D911 1SS355
(G)
R948 ***
(Y/V) V/Y
R961 0
D912 1SS355
D914 1SS355
IC903 MM1507XN
R967 ***
R968 ***
C956 0.1 YF
C957 0.1 YF
Video Amp.
(V)
D916 1SS355
D915 ***
R964 ***

H

(V) ➡ : V SIGNAL ROUTE
(Y) ➡ : Y SIGNAL ROUTE
(C) ➡ : C SIGNAL ROUTE
⇨ : AUDIO SIGNAL ROUTE

(Y/V) ➡ : Y/V SIGNAL ROUTE
(R/C) ➡ : R/C SIGNAL ROUTE
(R) ➡ : R SIGNAL ROUTE
(G) ➡ : G SIGNAL ROUTE
(B) ➡ : B SIGNAL ROUTE

RY901-RY905: Relay SW

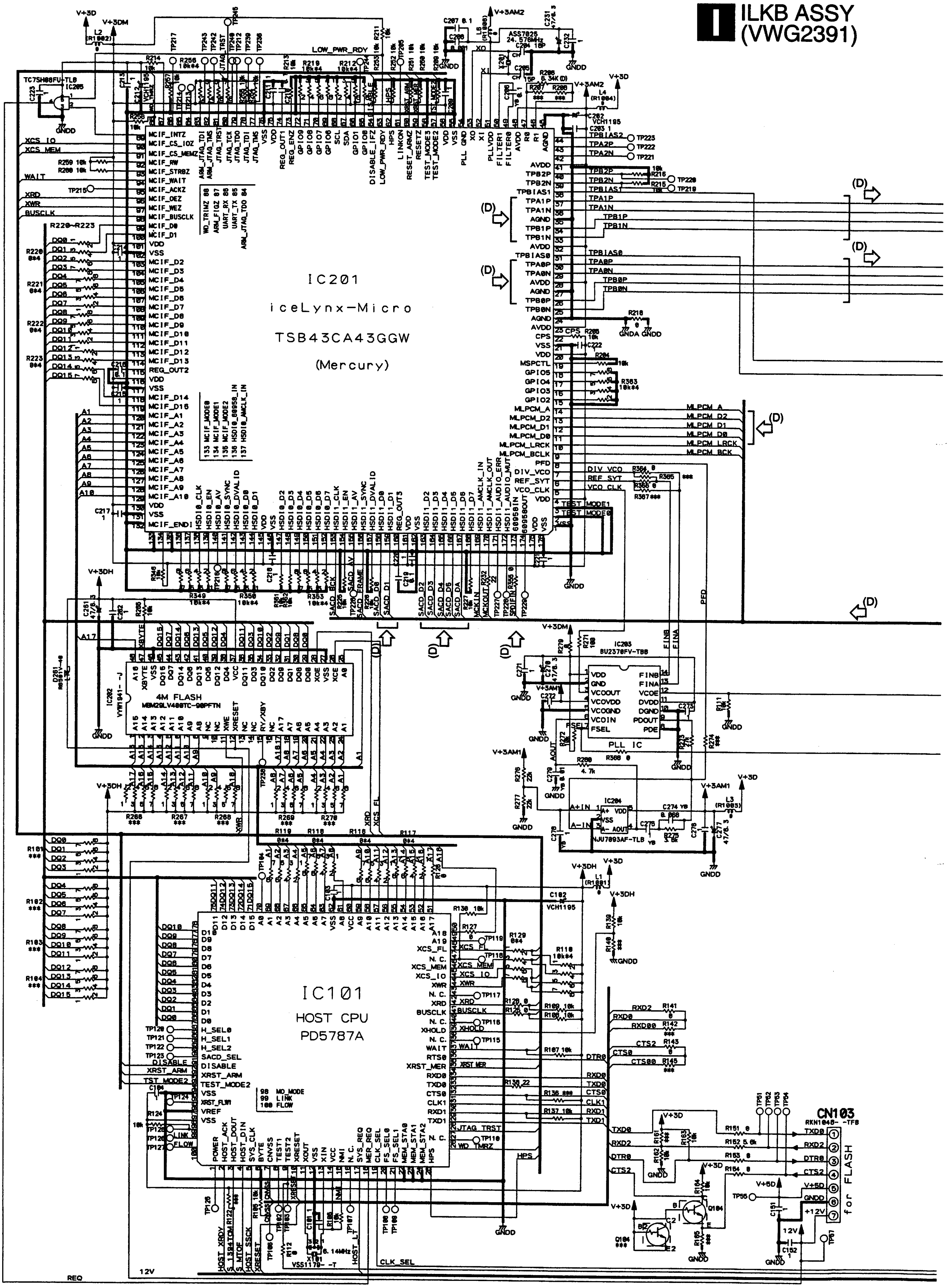

R913 0
R912 470
V+11V
RY901 VSR1017-
C907 0.1 YF
D902 ***
R914 0
GNDV
R916 470
R917 ***
C904 220p
GNDA
EURO CONNECTOR
JA901 VKB1157- [OUT]
1 R OUT
2 R IN
3 L OUT
4 GNDA
5 GNDV
6 L IN
7 B
8 SQUEEZE
9 GNDV
10 NC
11 G
12 NC
13 GNDV
14 GNDV
15 R/C
16 BLANK
17 GNDV
18 GNDV
19 V/Y OUT
20 V IN
21 GNDV
R915 0
R918 0
C910 390p
C921 390p
R920 0
R919 470
RY902 VSR1017-
C917 0.1 YF
D903 ***
R925 0
R929 470
R930 ***
R921 0
C914 220p
C942 ***
C919 ***
R922
C944 ***
R926 0
C923 ***
R931 0
C903 390p
C924 0.1YF
R997 ***
R933 ***
R932 75 (F)
RY903 VSR1017-
D904 1SS355
C925 0.1 YF
JA902 VKB1157- [IN]
1 R OUT
2 R IN
3 L OUT
4 GNDA
5 GNDV
6 L IN
7 B IN
8 SQUEEZE IN
9 GNDV
10 NC
11 G IN
12 NC
13 GNDV
14 GNDV
15 R/C IN
16 BLANK IN
17 GNDV
18 GNDV
19 V OUT
20 V IN
21 GNDV
R934 0
C913 390p
C932 220p
C933 220p
C930 100/10
R936 0
R937 75 (F)
R938 ***
R939 ***
R940 ***
R941 0
C937 100/10
R942 0
R943 75 (F)
R944 ***
R945 ***
R946 ***
RY904 VSR1017-
C941 0.1 YF
D910 ***
C943 100/10
R949 0
R950 75 (F)
R951 ***
R952 ***
R953 ***
R954 0
R956 ***
R955 75 (F)
RY905 VSR1017-
C945 0.1 YF
D913 ***
R957 0
C946 1000/6.3
R998 0
R958 0
C947 ***
C948 ***
C953 1000/6.3
R999 0
R965 75 (F)
R966 0
R959 ***
C950 0.1 YF
R962 ***
C951 ***
D919
D917
D920
D918
C959 0.1
C958 0.1
UDZS5.6B-TRB
DA204K-TLB
(R/C)
(B)
(G)
(Y/V)
(V)

***:parts not mounted

▭ : The power supply is shown with the marked box.

3.12 ILKB ASSY

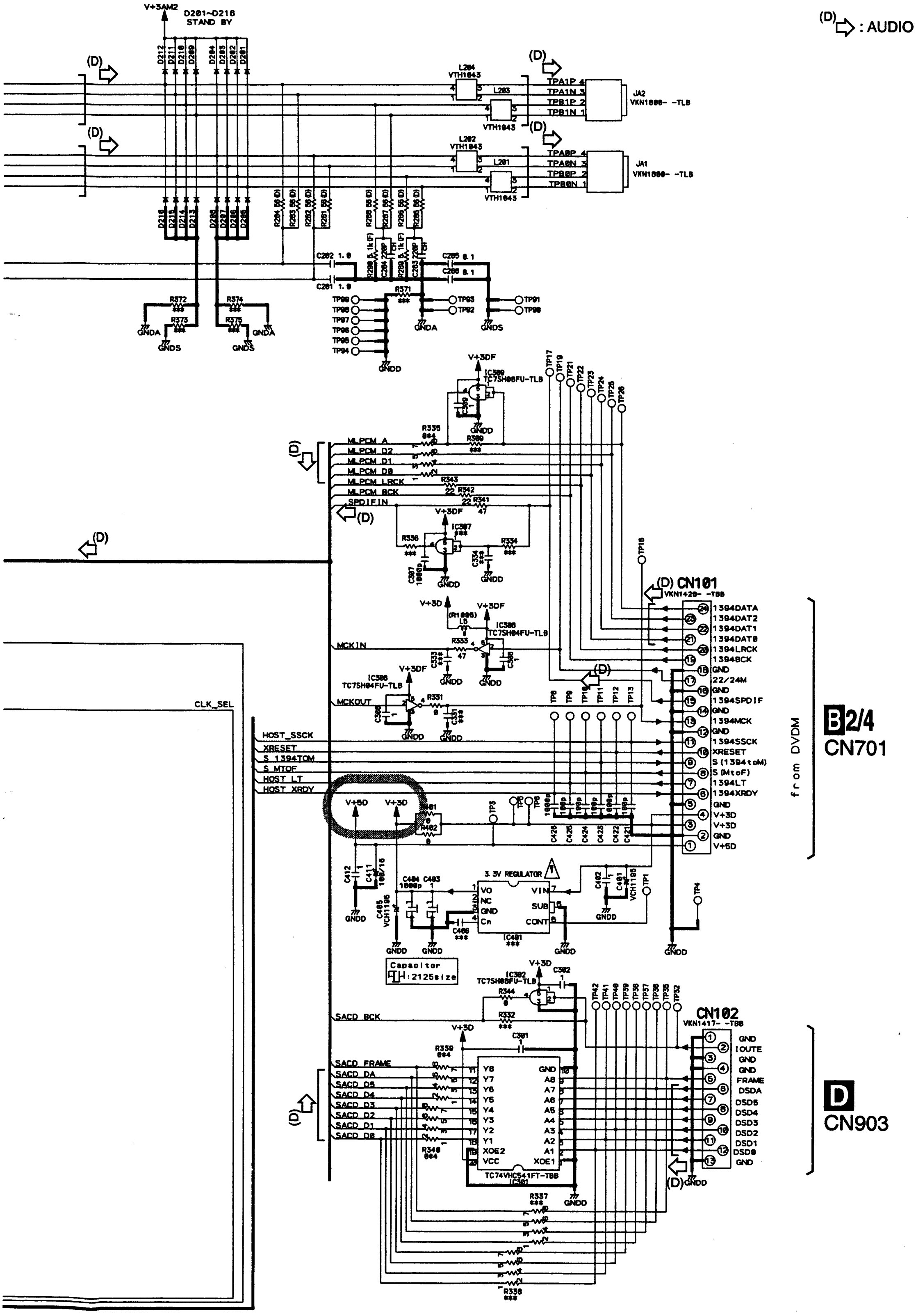
I ILKB ASSY
(VWG2391)


IC201
iceLynx-Micro
TSB43CA43GGW
(Mercury)
IC101
HOST CPU
PD5787A
IC202
4M FLASH
MBM29LV400TC-90PFTN
IC203
BU2378FV-TBB
PLL IC
IC204
NJU7093AF-TLB
IC205
TC7SH08FU-TLB
X201
AS57025
24.576MHz
X101
VSS1178- -T
6.14MHz
CN103
for FLASH
TXD0
RXD2
DTR0
CTS2
V+5D
GNDD
+12V
V+3D
V+3DM
V+3DH
V+3AM1
V+3AM2
LOW_PWR_RDY
XCS_IO
XCS_MEM
WAIT
XRD
XWR
BUSCLK
MLPCM_A
MLPCM_D2
MLPCM_D1
MLPCM_D0
MLPCM_LRCK
MLPCM_BCK
DIV_VCO
REF_SYT
VCO_CLK
TEST_MODE1
TEST_MODE0
PFD
FINB
FINA
SACD_BCK
SACD_AV
SACD_FRAME
SACD_D1
SACD_D2
SACD_D3
SACD_D4
SACD_D5
SACD_D6
SACD_DA
MCKOUT
SDIF
XRST_ARM
TEST_MODE2
DISABLE
JTAG_TRST
WD_TMRZ
HPS
CLK_SEL
REQ
12V
(D)

All ＊＊＊ are stand by.

A

▬ : The power supply is shown with the marked box.


(D)⇨ : AUDIO (DIGITAL) SIGNAL ROUTE
V+3AM2
D201~D216 STAND BY
L204 VTH1043
L203
L202 VTH1043
L201
TPA1P 4
TPA1N 3
TPB1P 2
TPB1N 1
TPA0P 4
TPA0N 3
TPB0P 2
TPB0N 1
JA2 VKN1800- -TLB
JA1 VKN1800- -TLB
C202 1.0
C201 1.0
C205 0.1
C206 0.1
R371
R372
R373
R374
R375
GNDA
GNDS
GNDD
TP99 TP98 TP97 TP96 TP95 TP94
TP93 TP92 TP91 TP90
V+3DF
IC309 TC7SH08FU-TLB
R335
R380
MLPCM A
MLPCM D2
MLPCM D1
MLPCM D0
MLPCM LRCK
MLPCM BCK
SPDIFIN
R343
R342 22
R341 47
IC307
R336
R334
C307 1000p
(D) CN101
VKN1420- -TBB
1394DATA
1394DAT2
1394DAT1
1394DAT0
1394LRCK
1394BCK
GND
22/24M
GND
1394SPDIF
GND
1394MCK
GND
1394SSCK
XRESET
S(1394toM)
S(MtoF)
1394LT
1394XRDY
GND
V+3D
V+3D
GND
V+5D
from DVDM
B 2/4
CN701
V+3D
(R1006)
L5
IC308 TC7SH04FU-TLB
MCKIN
R333 47
IC306 TC7SH04FU-TLB
MCKOUT
R331
CLK_SEL
HOST_SSCK
XRESET
S_1394TOM
S_MTOF
HOST_LT
HOST_XRDY
V+5D
V+3D
R401
R402
C426 C425 C424 C423 C422 C421
3.3V REGULATOR
VO NC GND Cn
VIN SUB CONT
IC401
C404 1000p
C403
C406
C405 VCH1195
C401 VCH1195
C402
C412
C411
Capacitor :2125size
IC302 TC7SH08FU-TLB
C302
R344
R332
SACD BCK
CN102
VKN1417- -TBB
GND
IOUTE
GND
GND
FRAME
DSDA
DSD5
DSD4
DSD3
DSD2
DSD1
DSD0
GND
D
CN903
C301
R339
SACD FRAME
SACD DA
SACD D5
SACD D4
SACD D3
SACD D2
SACD D1
SACD D0
Y8 Y7 Y6 Y5 Y4 Y3 Y2 Y1
XOE2 VCC
GND A8 A7 A6 A5 A4 A3 A2 A1 XOE1
TC74VHC541FT-TBB
IC301
R340
R337
R338

3.13 POWER SUPPLY UNIT

G POWER SUPPLY UNIT (VWR1361)

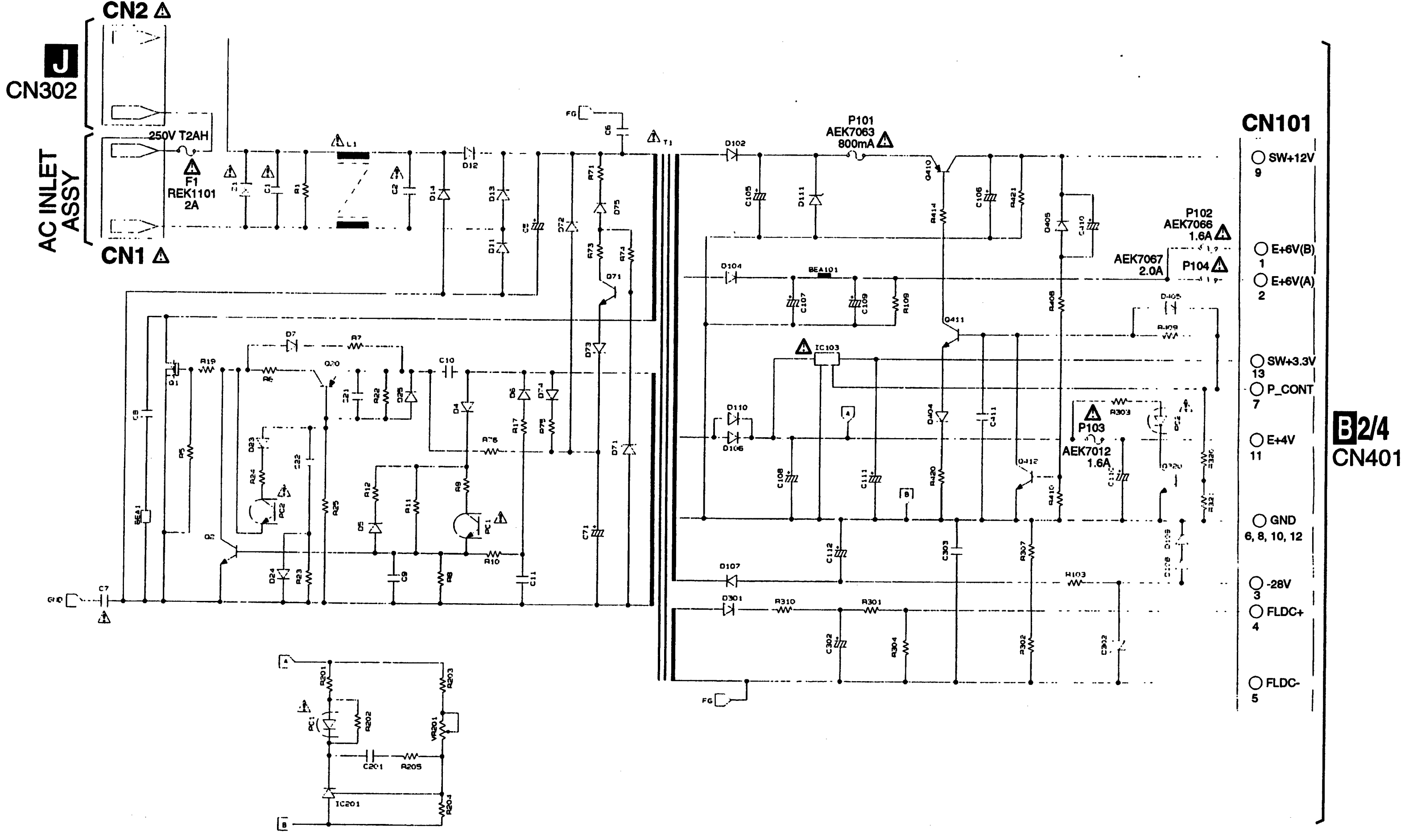
《 NOTE OF SPARE PARTS IN POWER SUPPLY (SYPS) UNIT 》

- In case of repairing, use the described parts only to prevent an accident.
- Please write the red √ mark on the board when the primary section of POWER SUPPLY (SYPS) Unit is repaired.
- Please take care to keep the space, not touching other parts when replacing the parts.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.800 MFD, BY LITTELFUSE INC. FOR P101 (AEK7063).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49101.6 MFD, BY LITTELFUSE INC. FOR P102 (AEK7066).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491002 MFD, BY LITTELFUSE INC. FOR P104 (AEK7067).


CN2 ⚠
J CN302
AC INLET ASSY
CN1 ⚠
250V T2AH
F1
REK1101
2A
L1
T1
FG
GND
P101
AEK7063
800mA ⚠
P102
AEK7066
1.6A ⚠
AEK7067
2.0A
P104 ⚠
P103
AEK7012
1.6A
IC103
IC201
PC1
PC2
Q1
Q2
Q20
Q71
Q410
Q411
Q412
BEA1
BEA101
D102
D104
D107
D110
D106
D111
D301
D404
D405
C105
C106
C107
C108
C109
C111
C112
C302
C303
C410
C411
C201
R201
R202
R203
R204
R205
VR201
R301
R302
R304
R307
R310
R103
R109
R303
R408
R410
R414
R420
R421
CN101
SW+12V 9
E+6V(B) 1
E+6V(A) 2
SW+3.3V 13
P_CONT 7
E+4V 11
GND 6, 8, 10, 12
-28V 3
FLDC+ 4
FLDC- 5
B 2/4
CN401

• NOTE FOR FUSE REPLACEMENT

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49101.6 MFD, BY LITTELFUSE INC. FOR P103 (AEK7012).

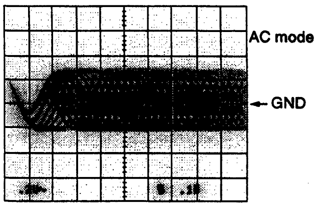
3.14 WAVEFORMS [DVDM ASSY]

Note : The encircled numbers denote measuring point in the schematic diagram.

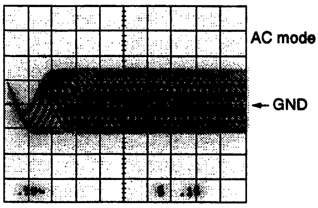
B DVDM ASSY

Measurement condition : No. 1 to 4 and 6 to 11 : MJK1, Title 1-chp 1
No. 5 : CD, ABEX-784 Track 1
No. 12 to 14 : DVD-REF-A1, T2-Chap.1
No. 15 to 20 : DVD-REF-A1, T2-Chap.19

① **IC101-pin 3 (RF)**
V: 200mV/div. H: 0.1µsec/div.

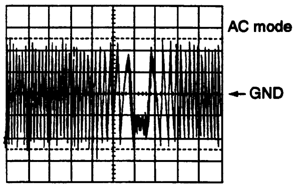


② **Q106-emitter (RFO)**
V: 500mV/div. H: 0.1µsec/div.

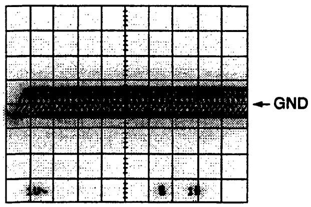


③

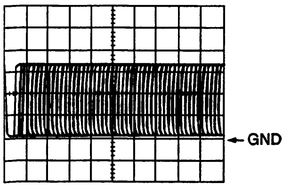
④ **IC101-pin 42 (Tracking Error)**
(Al-Inner Tracking Off)
V: 500mV/div. H: 2msec/div.



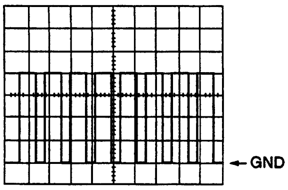
⑤ **IC201 - pin 39 (EFM before slice)**
V: 0.5V/div. H: 0.2µsec/div.



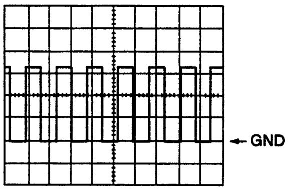
⑥ **IC201 - pin 1 (EFM)**
V: 1V/div. H: 0.2µsec/div.



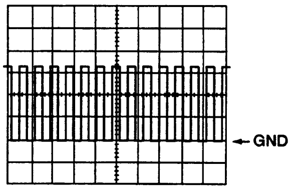
⑦ **IC251 - pin 24 (FG)**
V: 1V/div. H: 5msec/div.



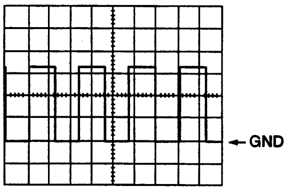
⑧ **Foot of R261 (FPWM)**
V: 1V/div. H: 10µsec/div.



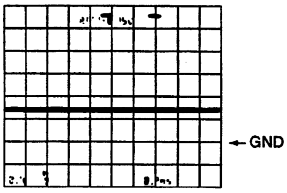
⑨ **Foot of R262 (VPWM)**
V: 1V/div. H: 10µsec/div.



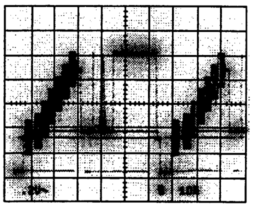
⑩ **Foot of R263 (PPWM)**
V: 1V/div. H: 0.2msec/div.



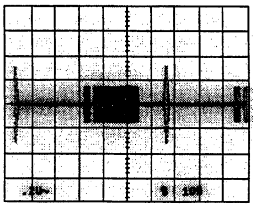
⑪ **Foot of R264 (RPWM)**
V: 1V/div. H: 5msec/div.



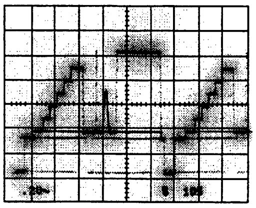
⑫ **Foot of R964 (V)**
V: 0.2V/div. H: 10µsec/div.



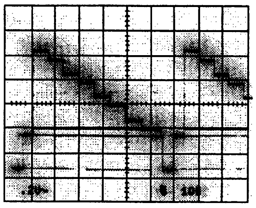
⑬ **Foot of R963 (C)**
V: 0.2V/div. H: 10µsec/div.



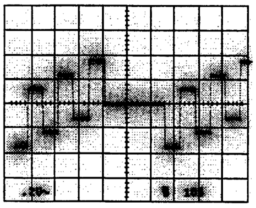
⑭ **Foot of R960 (Y)**
V: 0.2V/div. H: 10µsec/div.



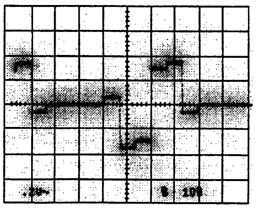
⑮ **Foot of R959 (Y)**
V: 0.2V/div. H: 10µsec/div.



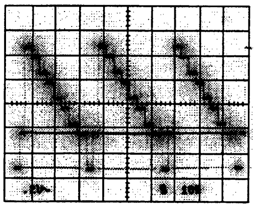
⑯ **Foot of R958 (Pb)**
V: 0.2V/div. H: 10µsec/div.



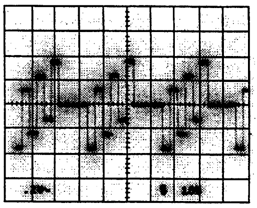
⑰ **Foot of R957 (Pr)**
V: 0.2V/div. H: 10µsec/div.



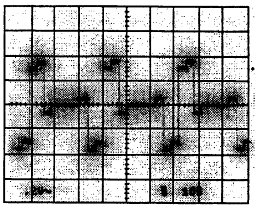
⑱ **Foot of R959 (Y)**
V: 0.2V/div. H: 10µsec/div.



⑲ **Foot of R958 (Pb)**
V: 0.2V/div. H: 10µsec/div.



⑳ **Foot of R957 (Pr)**
V: 0.2V/div. H: 10µsec/div.



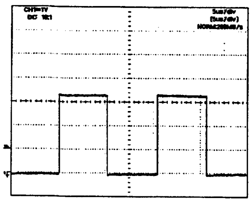
3.15 WAVEFORMS [JACB ASSY]

Note : The encircled numbers denote measuring point in the schematic diagram.

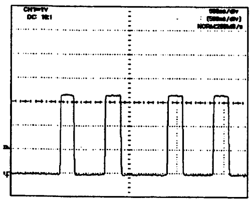
C JACB ASSY

Measurement condition : No. 21 to 25 : DVD-REF-A1, T2-Chap.1

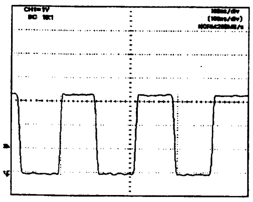
㉑ **IC301-pin 4 (LRCK)**
V: 1V/div. H: 5µsec/div.



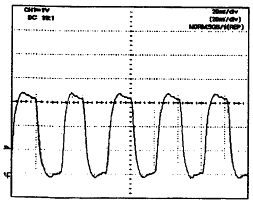
㉒ **IC301-pin 5 (DATA0)**
V: 1V/div. H: 500nsec/div.



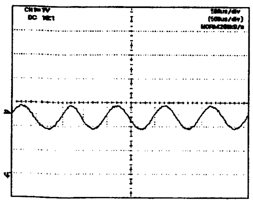
㉓ **IC301-pin 6 (BCK)**
V: 1V/div. H: 100nsec/div.



㉔ **IC301-pin 7 (PMCK)**
V: 1V/div. H: 20nsec/div.



㉕ **IC302 - pin 1 (Analog OUT)**
V: 1V/div. H: 500µsec/div.

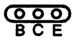
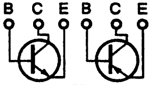
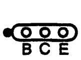
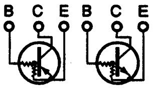
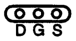
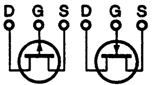
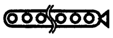
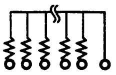
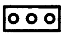
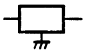


4. PCB CONNECTION DIAGRAM

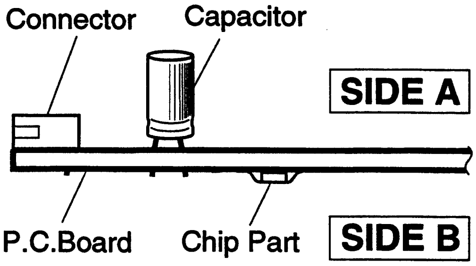
4.1 LOAB ASSY

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

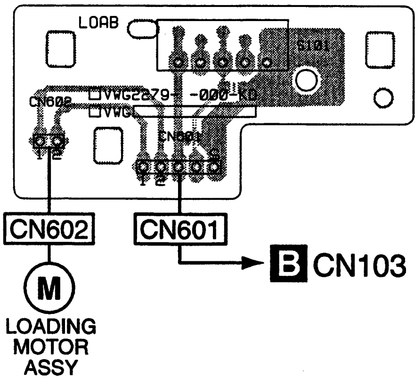
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

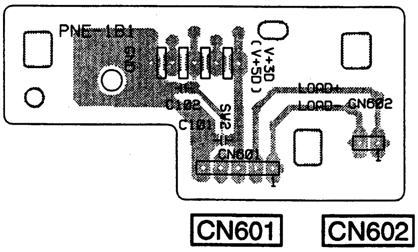

Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

SIDE A **SIDE B**

A LOAB ASSY

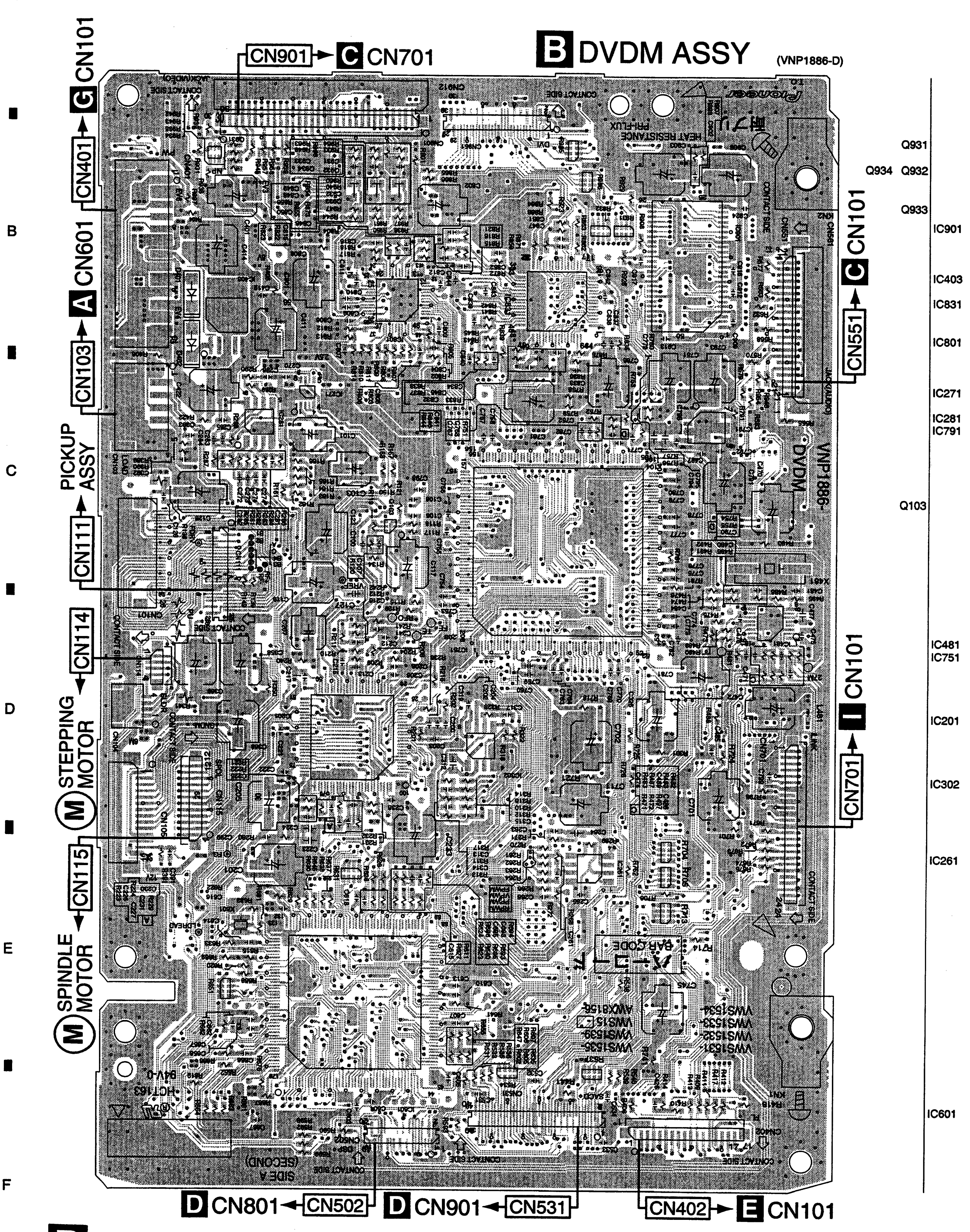

LOAB
S101
CN602
VWG2279- -000-KD
CN601
CN602
CN601
B CN103
M
LOADING MOTOR ASSY

(VNP1836-B)


PNE-1B1
GND
V+3D
(V+5D)
LOAD+
LOAD-
CN602
C102
C101
SW2
CN601
CN601
CN602

4.2 DVDM ASSY

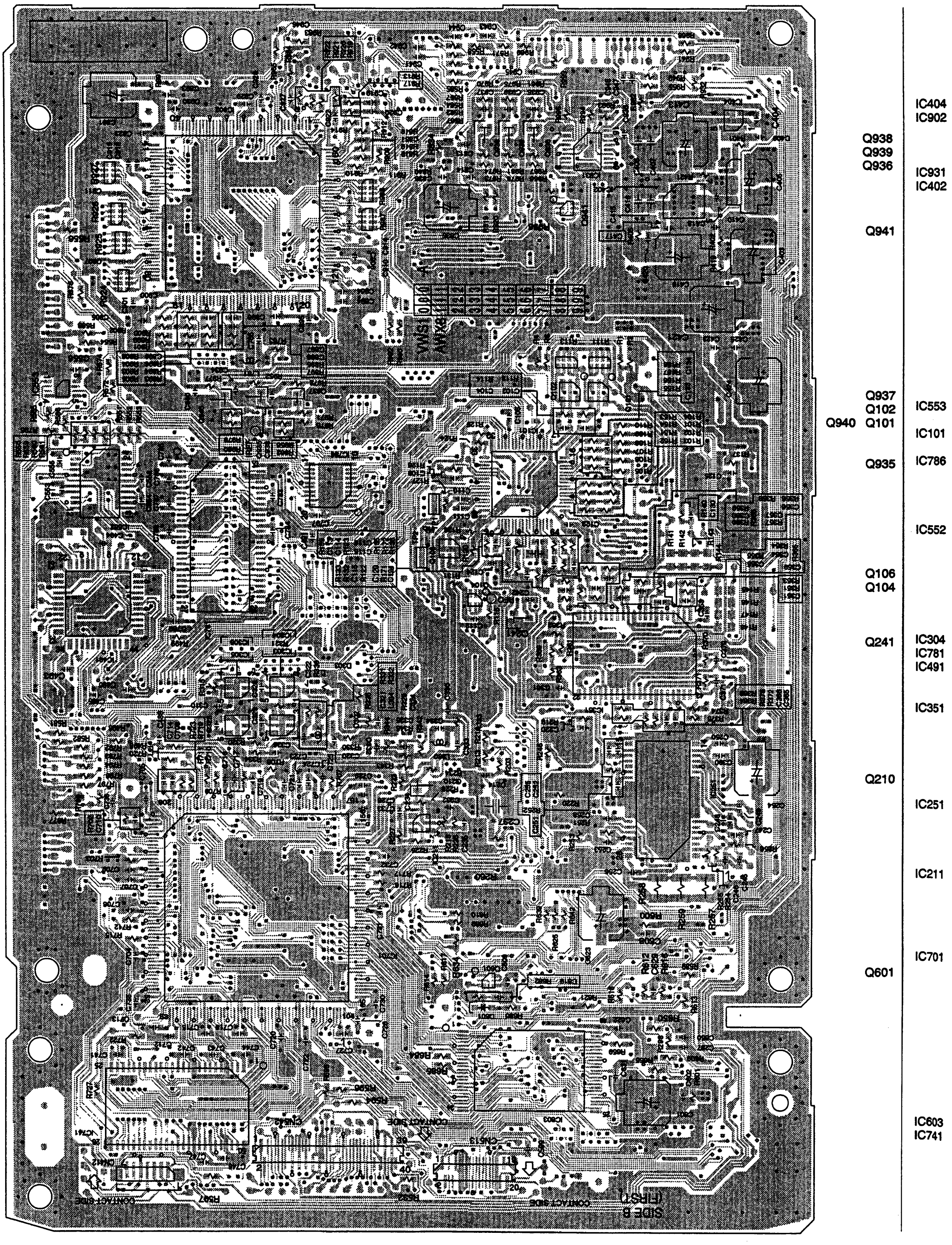
SIDE A


A
B
C
D
E
F
B DVDM ASSY
(VNP1886-D)
CN901
C CN701
G CN101
CN401
A CN601
CN103
PICKUP ASSY
CN111
CN114
STEPPING MOTOR
M
CN115
SPINDLE MOTOR
M
C CN101
CN551
I CN101
CN701
D CN801
CN502
D CN901
CN531
CN402
E CN101
Q931
Q934 Q932
Q933
IC901
IC403
IC831
IC801
IC271
IC281
IC791
Q103
IC481
IC751
IC201
IC302
IC261
IC601
VNP1886-
DVDM
HEAT RESISTANCE
PRI-FLUX
BAR CODE
HCT163
94V-0
SIDE A
(SECOND)
CONTACT SIDE

B

SIDE B

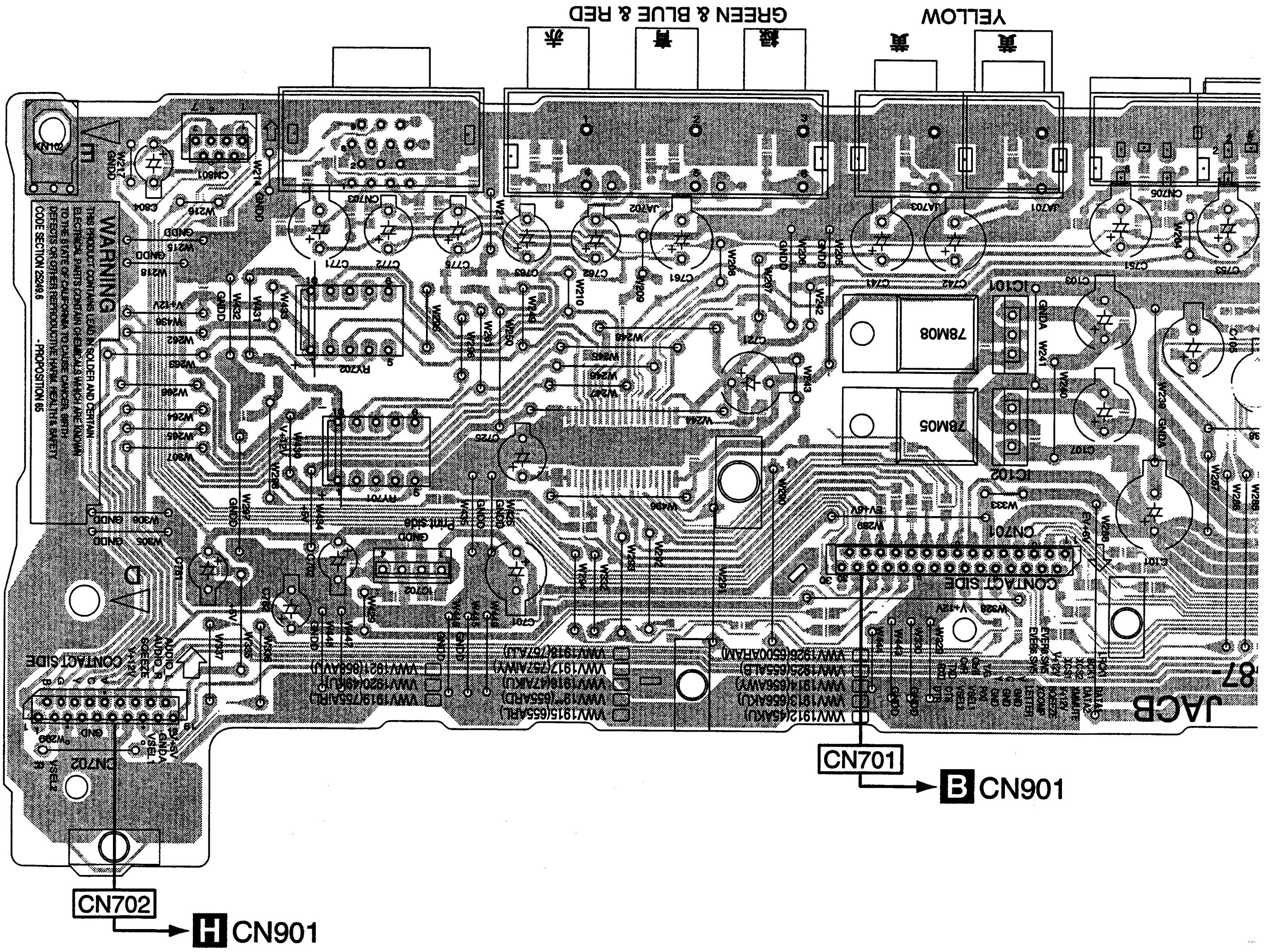
B DVDM ASSY (VNP1886-D)


A
B
C
D
E
F
IC404
IC902
Q938
Q939
Q936
IC931
IC402
Q941
Q937
Q102
Q940
Q101
IC553
IC101
Q935
IC786
IC552
Q106
Q104
Q241
IC304
IC781
IC491
IC351
Q210
IC251
IC211
IC701
Q601
IC603
IC741
SIDE B
CONTACT SIDE
B

4.3 JACB ASSY

SIDE A

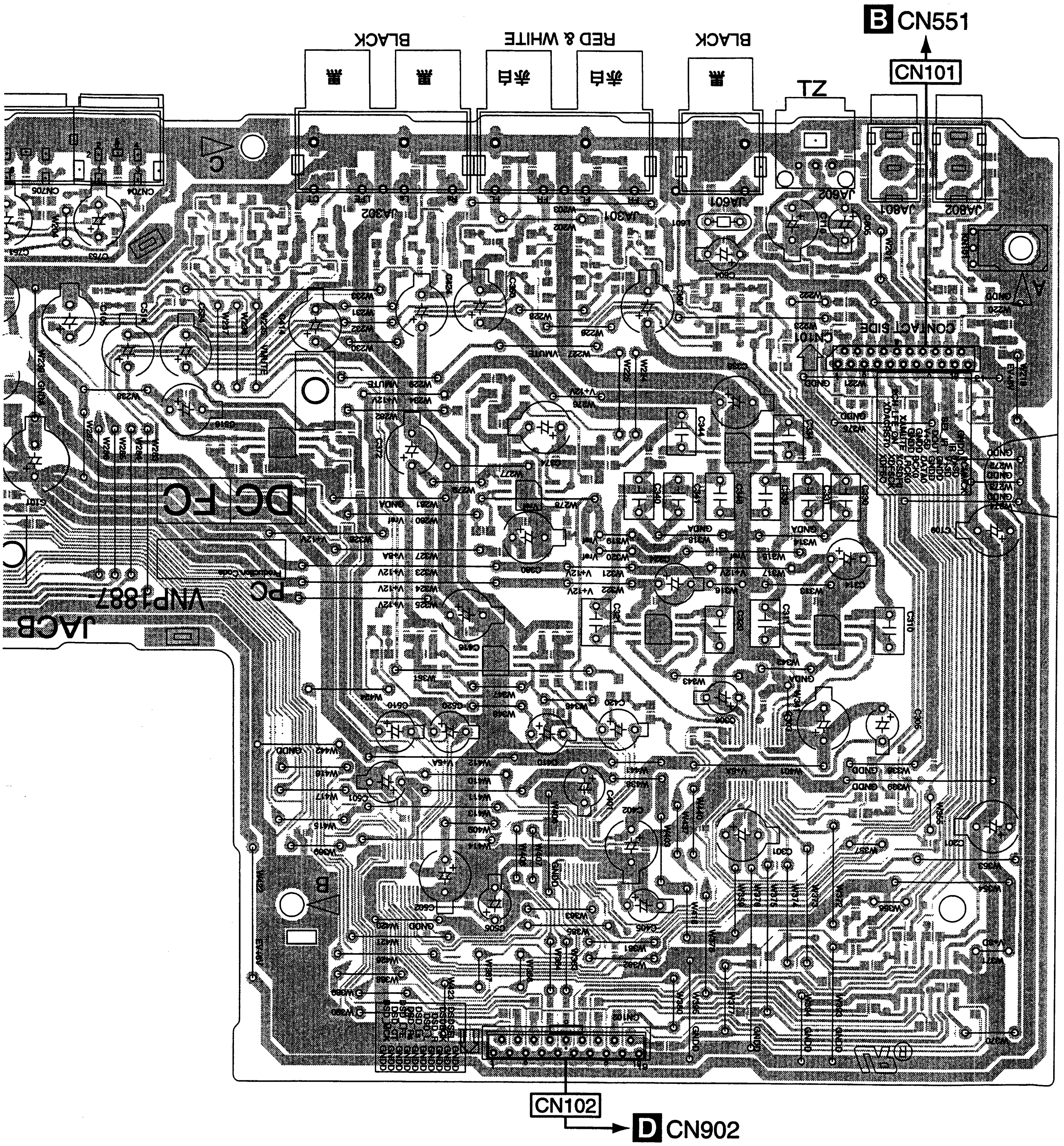
C JACB ASSY (VNP1887-D)


YELLOW
GREEN & BLUE & RED
78M08
78M05
IC101
IC102
WARNING
CONTACT SIDE
CN701
B CN901
CN702
H CN901
JACB

IC702

IC101
IC102

SIDE A

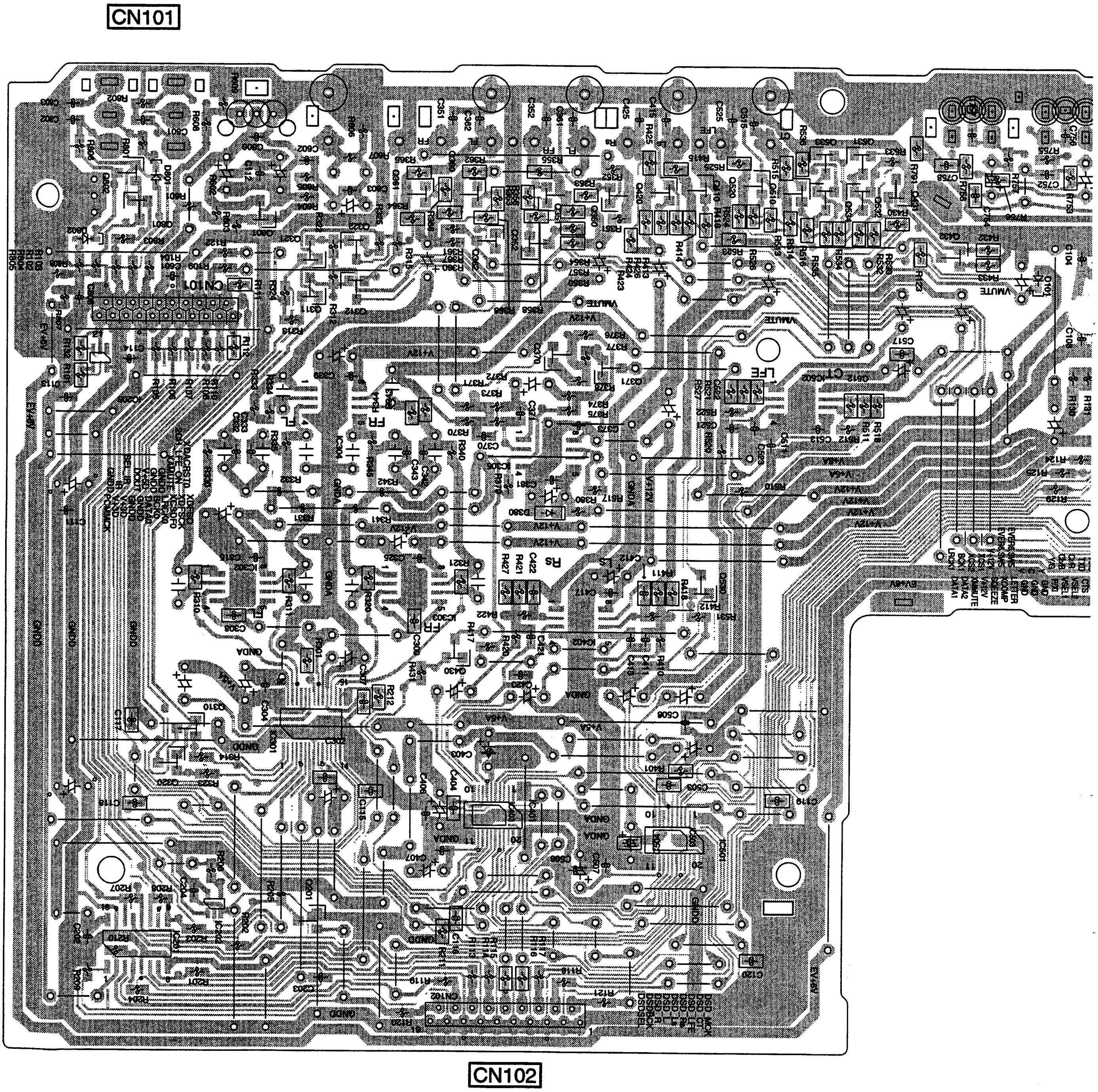

B CN551
CN101
TZ
BLACK
RED & WHITE
BLACK
CONTACT SIDE
DC FC
VNP1887
JACB
CN102
D CN902

C

A

SIDE B

C JACB ASSY (VNP1887-D)


CN101
CN102
B
C
D
E
GNDD
GNDA
V+12V
VMUTE
LFE
FR
FL
Rs
Ls
EV+6V

Q802 Q801 Q601 Q322 Q361 Q360 Q352 Q351 Q350 Q420 Q520 Q510 Q533 Q531 Q431 Q432
Q320 Q310 Q321 Q362 Q370 Q371 Q410 Q532
Q311 Q312 Q430 Q530 Q534
Q201

F

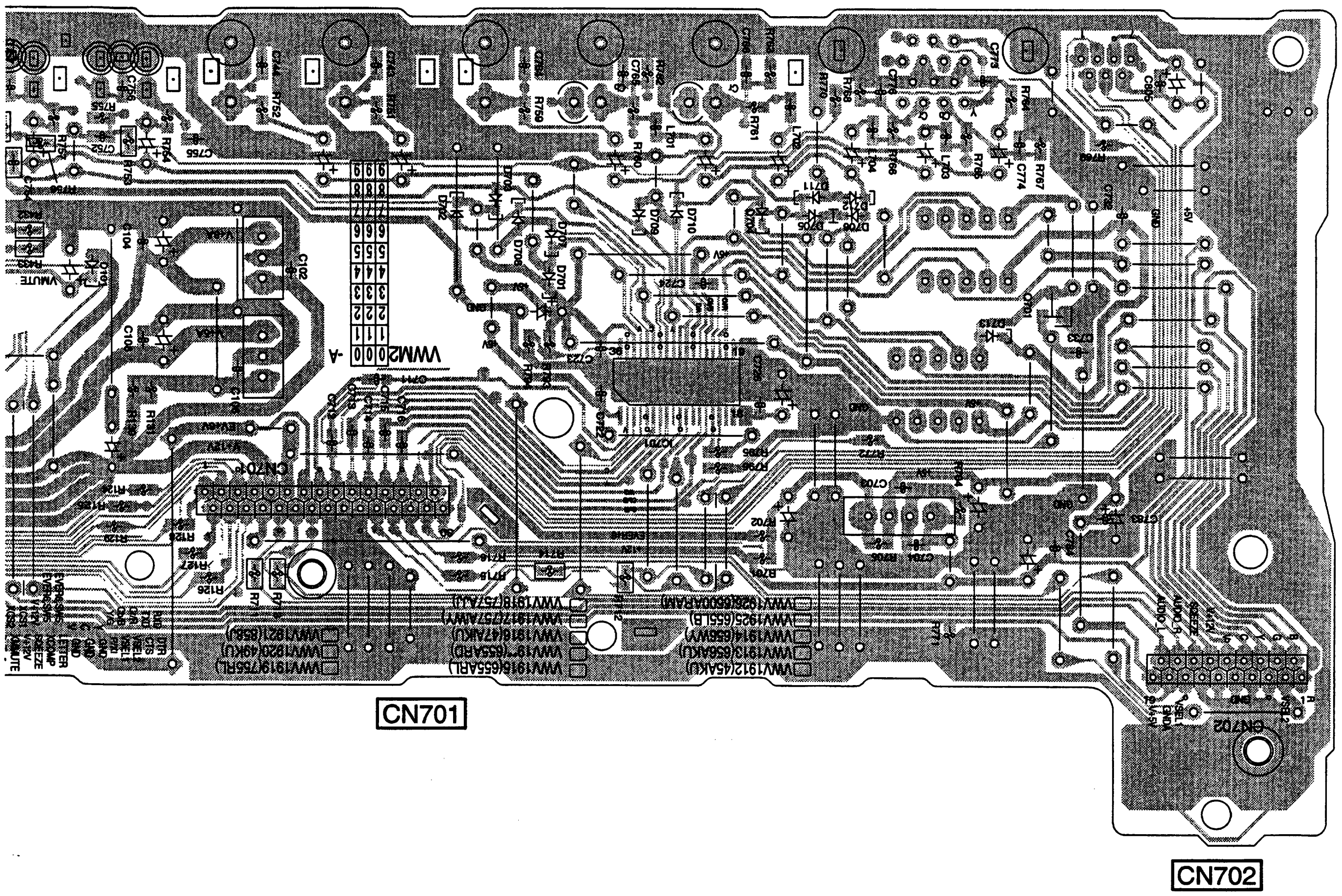
IC302 IC304 IC305 IC402 IC503
IC202 IC301 IC303 IC403 IC501
IC201 IC401

C

SIDE B

A

B


CN701
CN702

C

D

E

Q701

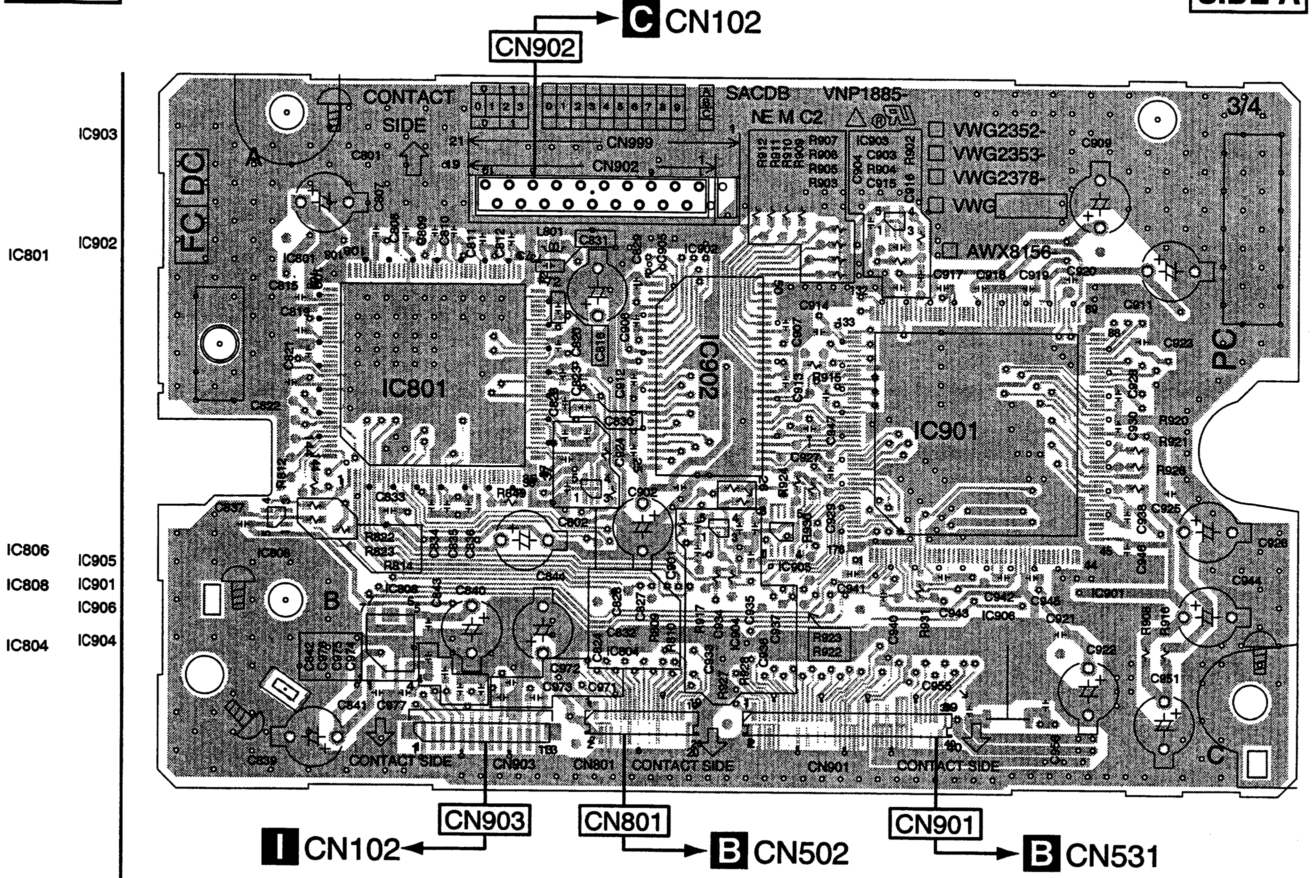
IC701

F

C

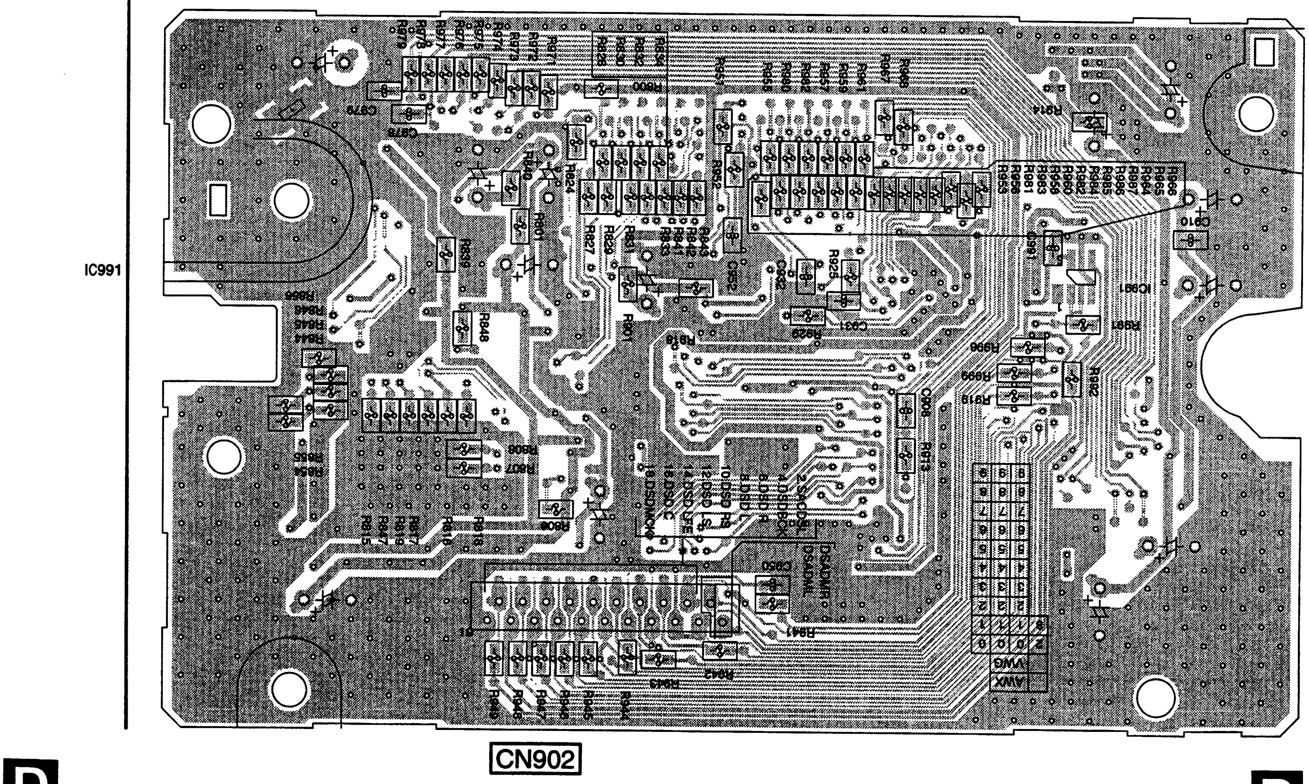
4.4 SACDB ASSY

SIDE A **SIDE A**


C CN102
CN902
CONTACT SIDE
SACDB VNP1885
NE M C2
CN999
VWG2352
VWG2353
VWG2378
VWG
AWX8156
374
FC DC
PC
IC801
IC902
IC901
IC903
IC806
IC808
IC804
IC905
IC906
IC904
CN903
CN801
CN901
I CN102
B CN502
B CN531

D SACDB ASSY (VNP1885-B)

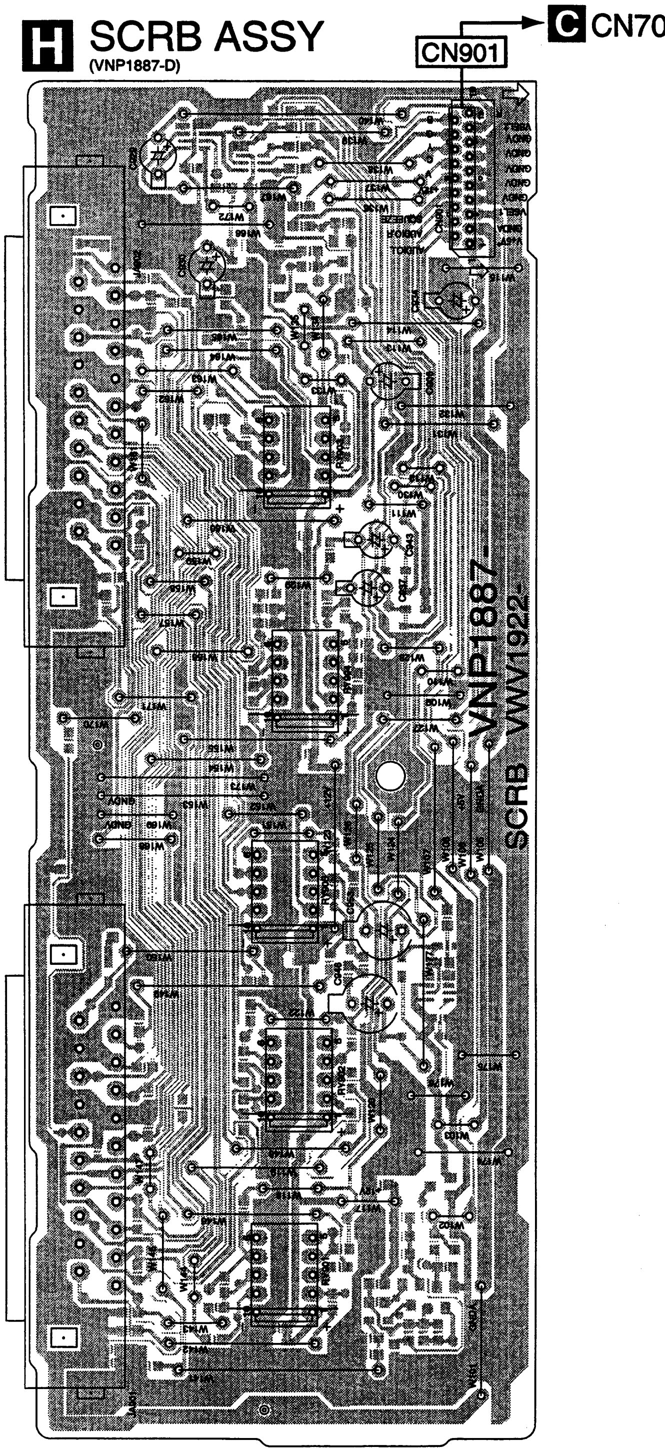
SIDE B **SIDE B**

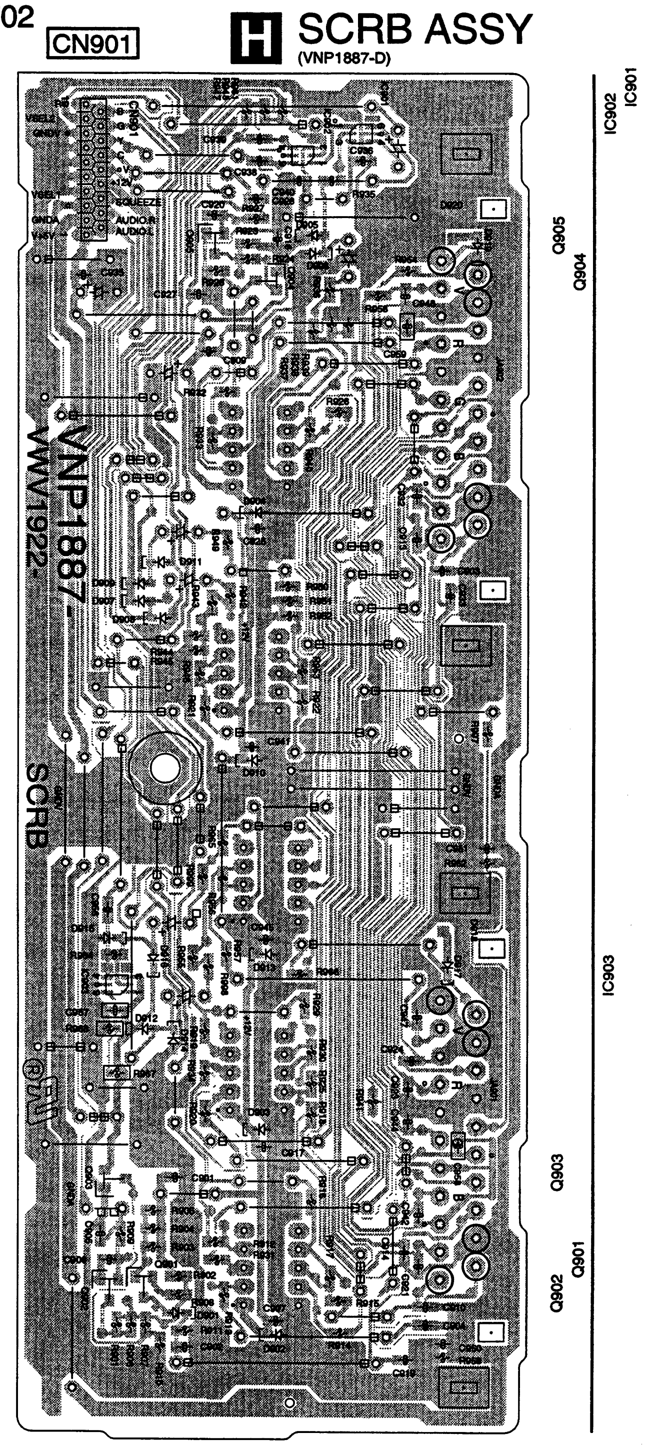

IC991
VWG
AWX
CN902

4.5 SCRB ASSY

SIDE A

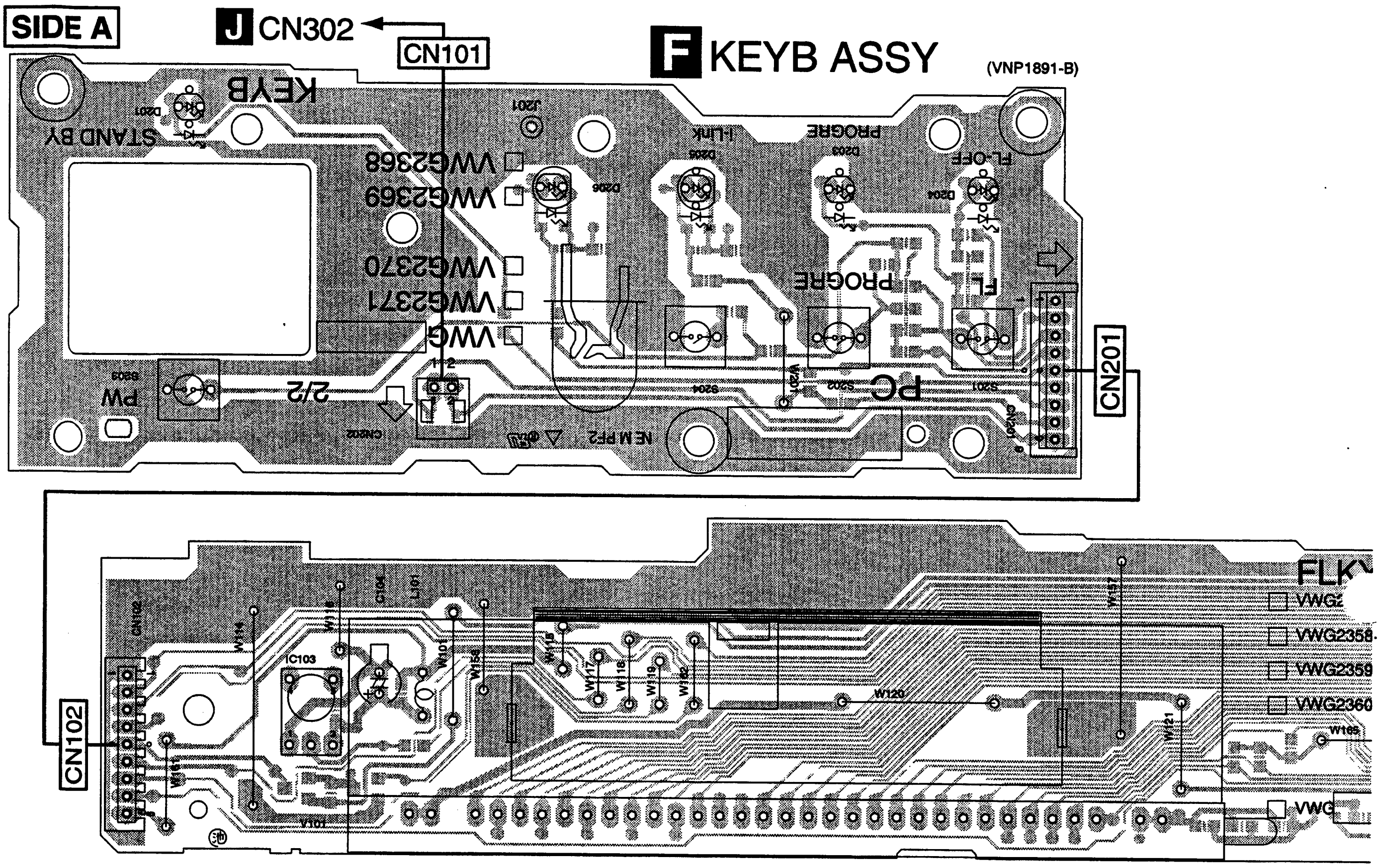
SIDE B


H
SCRB ASSY
(VNP1887-D)
CN901
C
CN702
VNP1887-
VWV1922-
SCRB

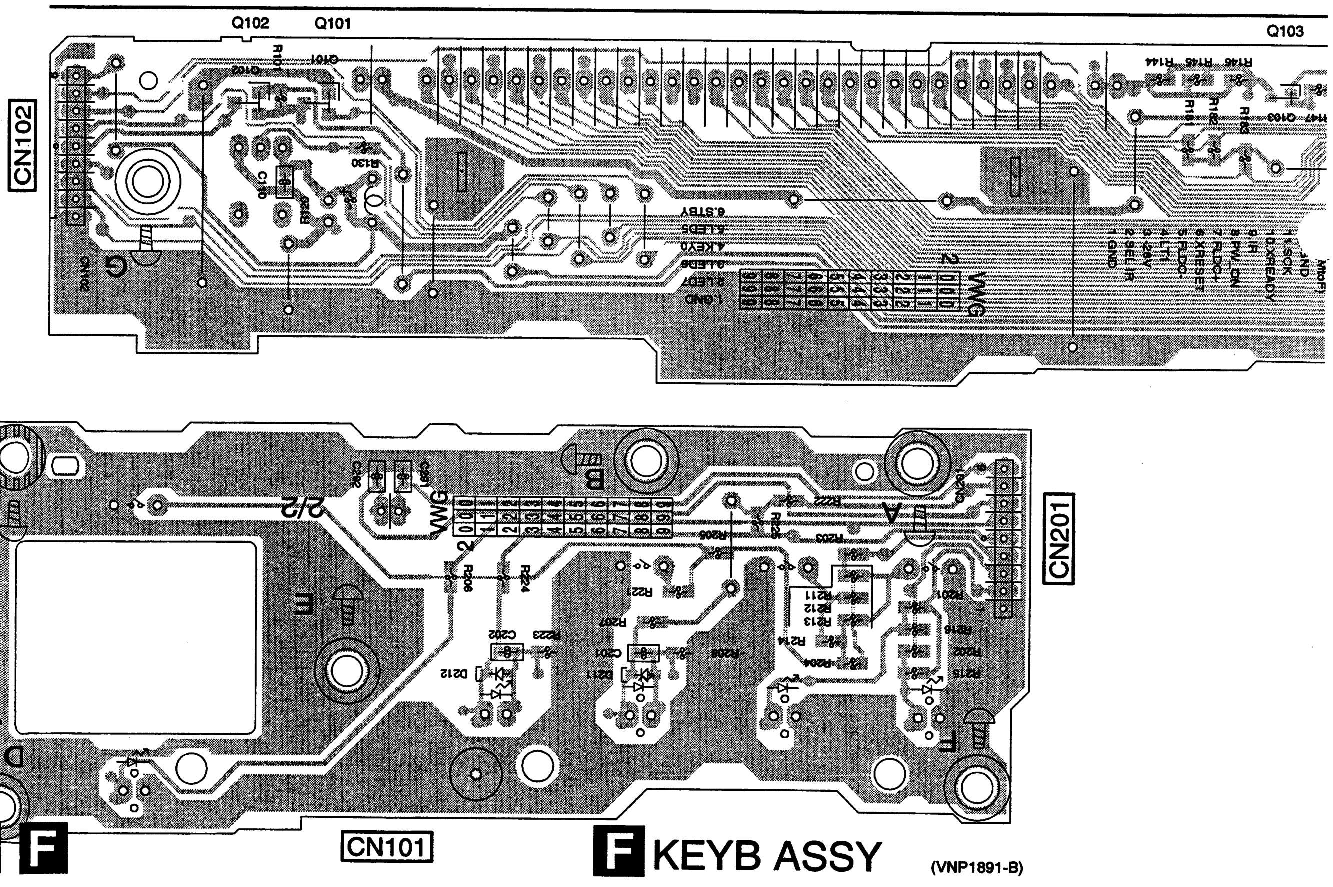

CN901
H
SCRB ASSY
(VNP1887-D)
VNP1887-
VWV1922-
SCRB
IC902
IC901
Q905
Q904
IC903
Q903
Q901
Q902

4.6 FLKY and KEYB ASSYS

SIDE A


J CN302
CN101
F KEYB ASSY
(VNP1891-B)
KEYB
STAND BY
VWG2368
VWG2369
VWG2370
VWG2371
VWG
i-Link
PROGRE
FL-OFF
PROGRE
FL
PC
PW
2/2
CN201
CN102
FLKY
VWG2358
VWG2359
VWG2360
VWG
IC103
V101
W120

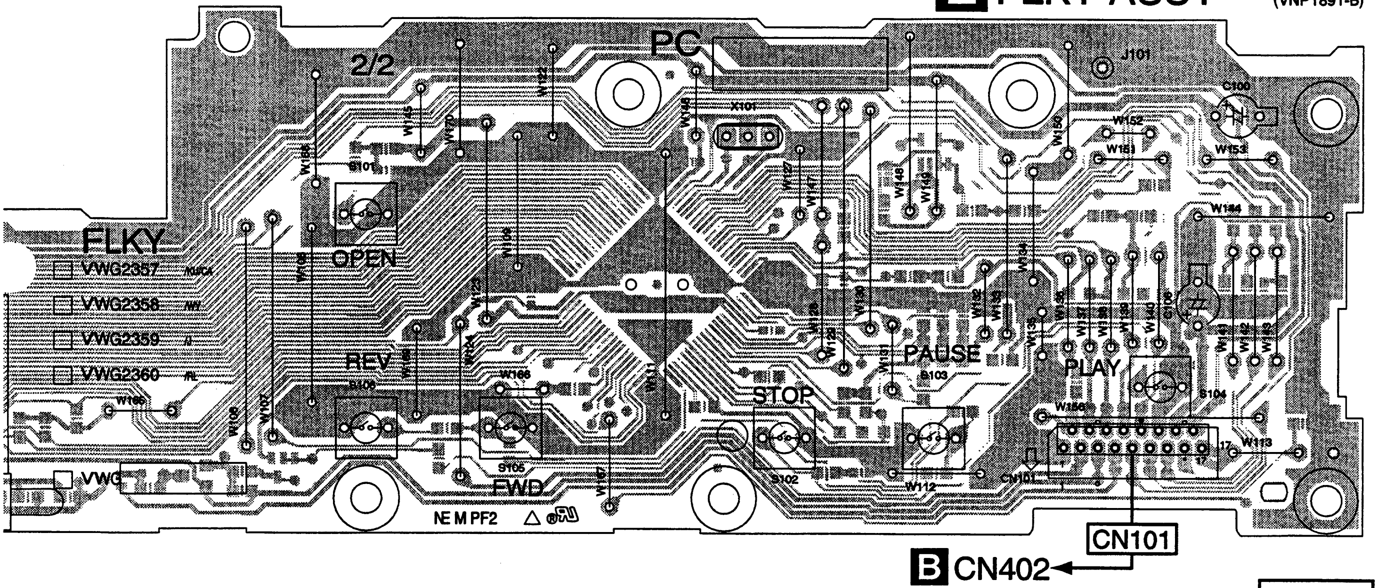
SIDE B


Q102
Q101
Q103
CN102
G
VWG
1.GND
2.LED7
3.LED8
4.KEY0
5.LED5
6.STBY
CN201
2/2
B
A
C
E
D
F
E F
CN101
F KEYB ASSY
(VNP1891-B)

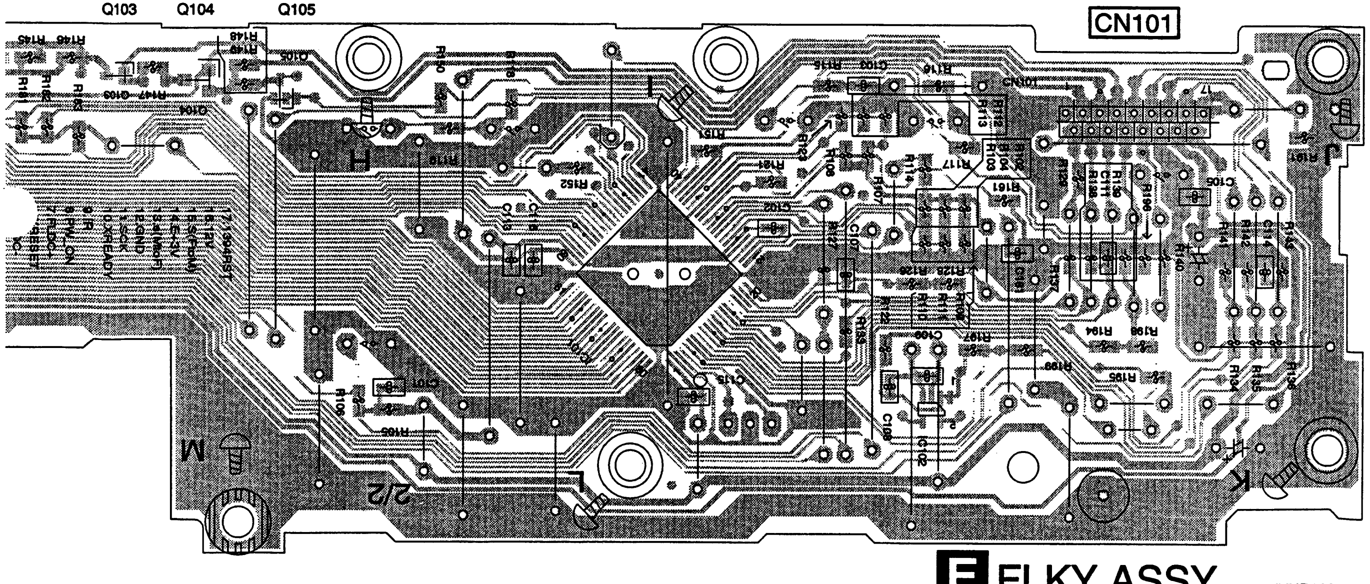
SIDE A

E FLKY ASSY

(VNP1891-B)


2/2
PC
J101
C100
X101
W152
W151
W153
W154
S101
OPEN
FLKY
VWG2357
VWG2358
VWG2359
VWG2360
VWG
REV
S106
W168
S105
FWD
STOP
S102
PAUSE
S103
PLAY
S104
W156
W113
W112
CN101
NE M PF2
CN101
B CN402

SIDE B


IC101
IC102
Q103
Q104
Q105
CN101
H
I
J
K
L
M
2/2

E FLKY ASSY

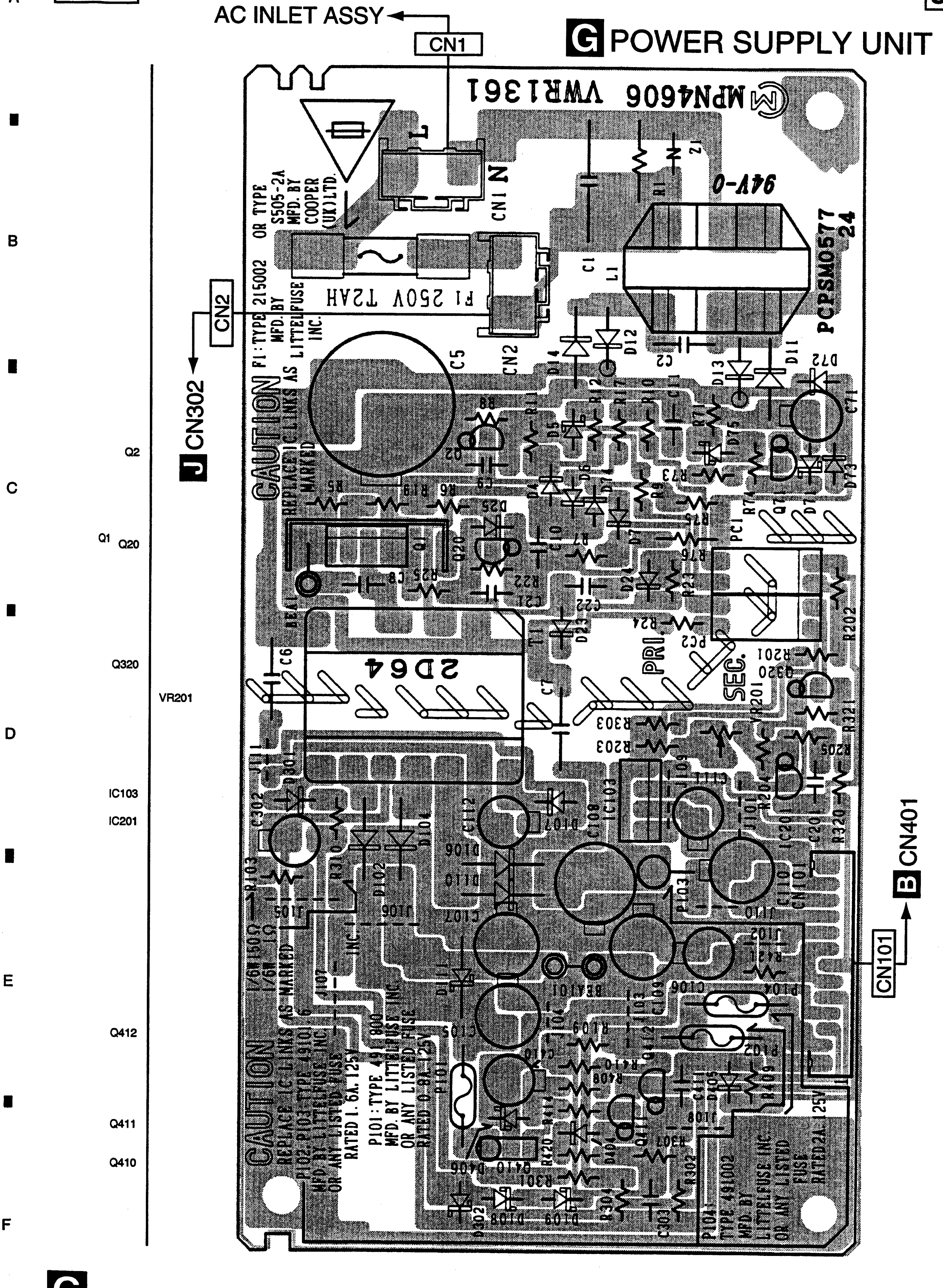
(VNP1891-B)

E

4.7 POWER SUPPLY UNIT

SIDE A

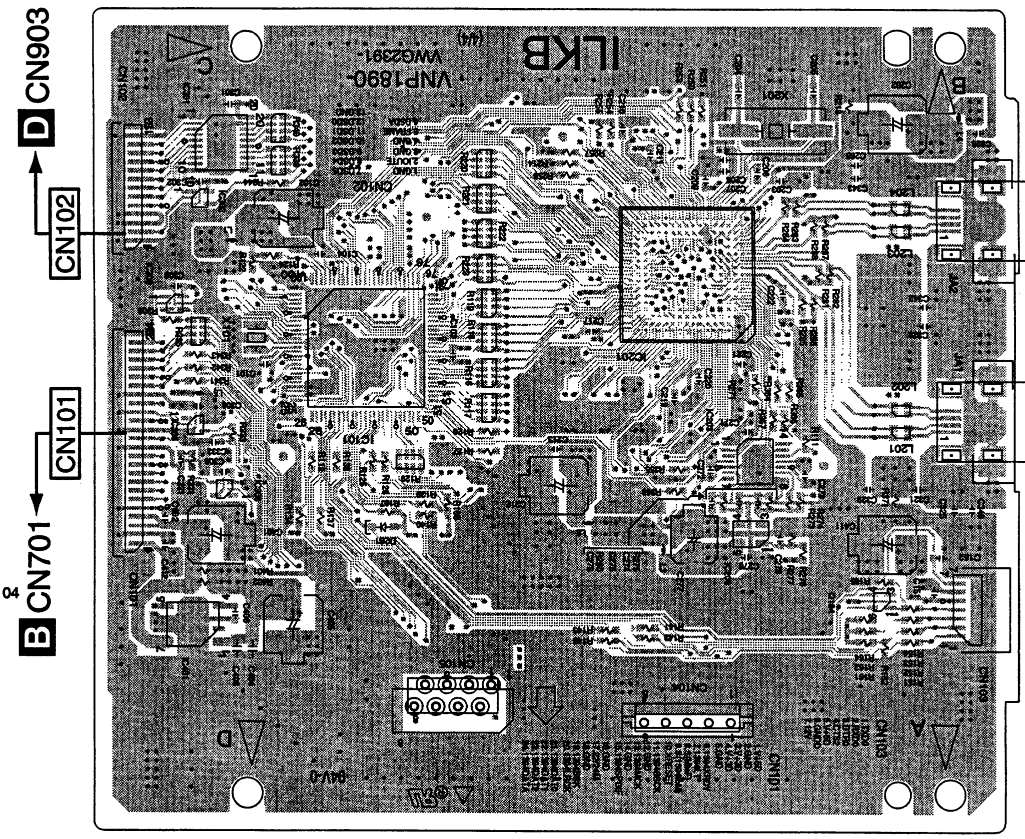
SIDE A


AC INLET ASSY
CN1
G POWER SUPPLY UNIT
MPN4606 VWR1361
94V-0
PCPSM0577 24
F1 250V T2AH
F1: TYPE 215002 OR TYPE S505-2A MFD. BY COOPER (UK) LTD.
MFD. BY LITTELFUSE INC.
CAUTION
REPLACE IC LINKS AS MARKED
CN2
J CN302
C5
2D64
PRI.
SEC.
B CN401
CN101
CAUTION
REPLACE IC LINKS AS MARKED
P102, P103: TYPE 491001.6 MFD. BY LITTELFUSE INC. OR ANY LISTED FUSE RATED 1.6A 125V
P101: TYPE 491 800 MFD. BY LITTELFUSE INC. OR ANY LISTED FUSE RATED 0.8A 125V
P104: TYPE 491002 MFD. BY LITTELFUSE INC. OR ANY LISTED FUSE RATED 2A 125V
A
B
C
D
E
F
Q2
Q1
Q20
Q320
VR201
IC103
IC201
Q412
Q411
Q410

4.8 ILKB ASSY

SIDE A

IC301
IC302
IC309
IC201
IC308 IC203
IC101
IC306
IC204
Q104
IC401

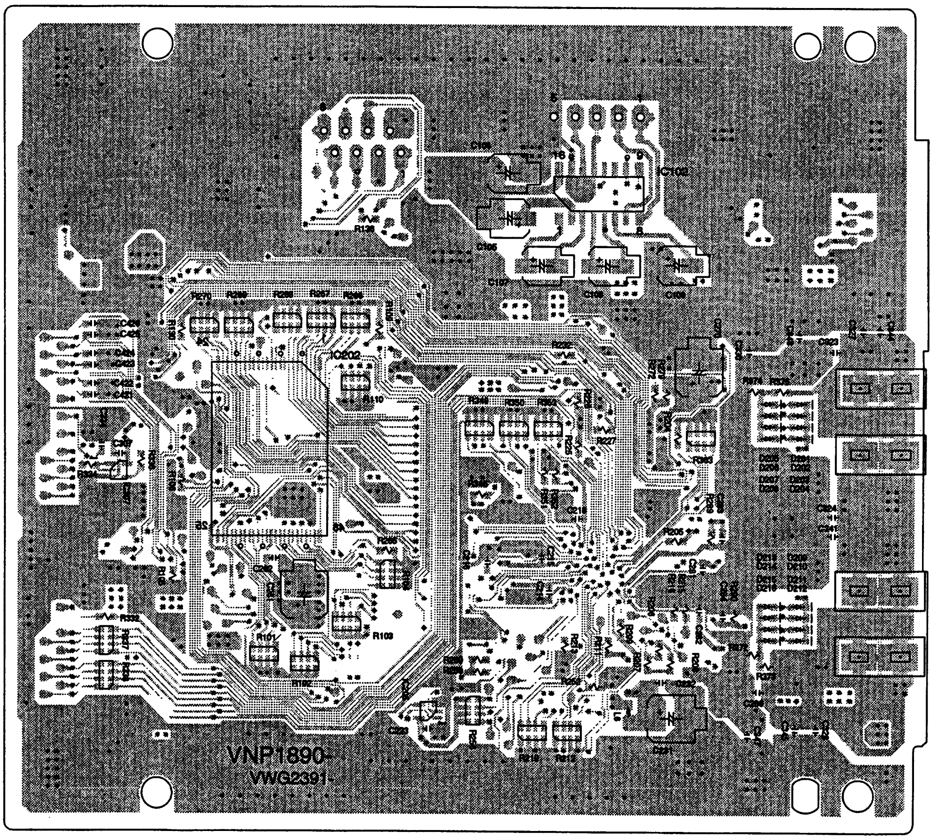

D CN903
CN102
CN101
B CN701
ILKB
VNP1890-
VWG2391-

SIDE A

I ILKB ASSY

(VNP1890-A)

SIDE B


IC102
IC202
R101
R103
VNP1890-
VWG2391-

SIDE B

IC102
IC202
IC307
IC205

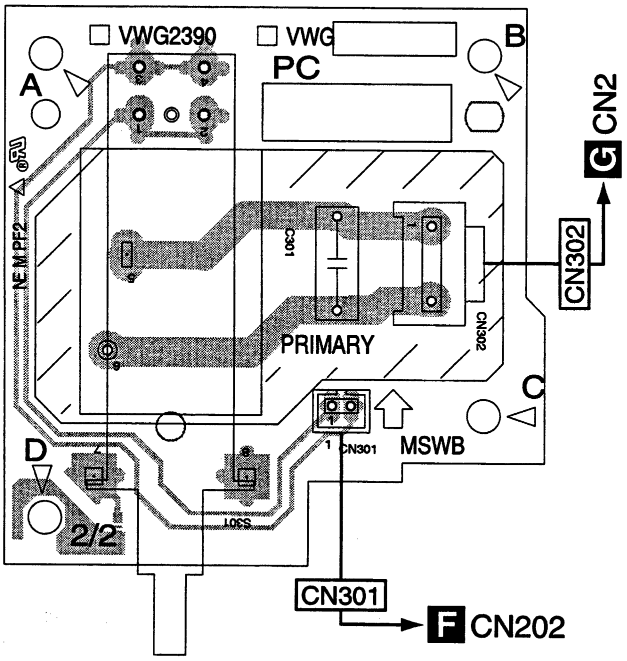
I

I

4.9 MSWB ASSY

SIDE A

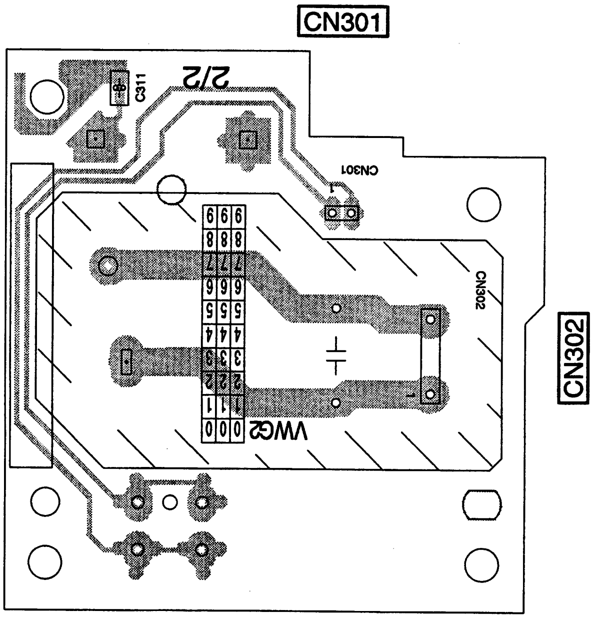
SIDE A


VWG2390
VWG
PC
A
B
C
D
NE M PF2
C301
CN302
PRIMARY
1
CN301
MSWB
2/2
S301
CN302
G CN2
CN301
F CN202

J MSWB ASSY (VNP1891-A)

SIDE B

SIDE B


CN301
2/2
C311
CN301
CN302
VWG2
CN302

J

J

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*

● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56×10^1 → 561 .... RD1/4PU$\boxed{5}\boxed{6}\boxed{1}$J
47k Ω → 47×10^3 → 473 .... RD1/4PU$\boxed{4}\boxed{7}\boxed{3}$J
0.5 Ω → R50 .... RN2H$\boxed{R}\boxed{5}\boxed{0}$K
1 Ω → 1R0 .... RS1P$\boxed{1}\boxed{R}\boxed{0}$K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562×10^1 → 5621 .... RN1/4PC$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F

LIST OF ASSEMBLIES

Mark	No. Description	Part No.
	[DV-757Ai/WYXJ]	
NSP	1..LOADING MECHA ASSY	VWT1203
NSP	2..LOAB ASSY	VWG2346
	1..DVDM ASSY	VWS1540
	1..JCSB ASSY	VWM2149
	2..JACB ASSY	VWV1917
	2..SCRB ASSY	VWV1922
	1..SACDB ASSY	VWG2353
	1..FLKB ASSY	VWM2136
	2..FLKY ASSY	VWG2358
	2..KEYB ASSY	VWG2369
	2..MSWB ASSY	VWG2390
	1..ILKB ASSY	VWG2391
⚠	1..POWER SUPPLY UNIT	VWR1361
	[DV-S755Ai/RLXJ/NC]	
NSP	1..LOADING MECHA ASSY	VWT1203
NSP	2..LOAB ASSY	VWG2346
	1..DVDM ASSY	VWS1534
	1..JCSB ASSY	VWM2151
	2..JACB ASSY	VWV1919
	1..SACDB ASSY	VWG2353
	1..FLKB ASSY	VWM2138
	2..FLKY ASSY	VWG2360
	2..KEYB ASSY	VWG2369
	2..MSWB ASSY	VWG2390
	1..ILKB ASSY	VWG2391
⚠	1..POWER SUPPLY UNIT	VWR1361

A LOAB ASSY [VWG2346]

SWITCHES AND RELAYS

Mark	No. Description	Part No.
	S101 REAF SWITCH	VSK1011

OTHERS

Mark	No. Description	Part No.
	CN602 CONNCTOR	S2B-PH-K
	CN601 CONNCTOR	S5B-PH-K
	PRINTED CIRCUIT BOARD	VNP1836

B DVDM ASSY [VWS1540]

SEMICONDUCTORS

Mark	No. Description	Part No.
	IC831	ADV7300AKST
	IC261, IC302	BA4510F
	IC251	BA6664FM
	IC741, IC901	HY57V161610DTC-8
	IC101	LA9704W
	IC201	LC78652W
	IC781	M2V64S40DTP-7
	IC351	M56788AFP
	IC751	M65776AFP
⚠	IC404	MM1385EN
⚠	IC791	MM1561JF
⚠	IC402	MM1565AF
	IC552	PD0274A
	IC601	PD6345A
	IC701	PE5286A
	IC491	PE9015B
	IC902	PM0033A
⚠	IC403	PQ025EZ01ZP
	IC481	SM8707HV
	IC786	TC74VHC541FT
	IC303, IC304, IC306	TC7SZU04F
	IC553	TC7WH157FU
	IC211	TK15404M
	IC603	VYW2045
	Q210, Q932–Q934, Q936	2SA1576A
	Q938, Q939	2SA1576A
	Q241	DTC114EUA
	Q101, Q102, Q106	HN1A01F
	Q103, Q104	HN1B04FU
	Q931	RN1911
	Q601, Q941	RN4982
	D302, D303	KV1470
	D401, D402	RB051L-40
	D601	RB501V-40

COILS AND FILTERS

Mark	No. Description	Part No.
	L304	LCYA1R2J2520
	L4080, L4090, L4100 CHIP BEADS	VTL1074
	L4110, L4120 CHIP BEADS	VTL1074
	L4130, L4820, L4880 CHIP BEADS	VTL1074
	L4910, L4930 CHIP BEADS	VTL1074
	L652 CHIP BEADS	VTL1074
	L4720 CHIP BEADS	VTL1079

Mark No.	Description	Part No.
L4710	CHIP BEADS	VTL1081
L4800, L481	CHIP BEADS	VTL1084

CAPACITORS

Mark No.	Description	Part No.
C480, C481, C662		CCSRCH100D50
C121, C532, C6270, C950		CCSRCH101J50
C953–C955		CCSRCH101J50
C314, C474, C798		CCSRCH150J50
C100, C133		CCSRCH151J50
C120		CCSRCH181J50
C484, C485, C487, C667		CCSRCH220J50
C134, C324, C391, C392		CCSRCH331J50
C945, C946		CCSRCH331J50
C109		CCSRCH391J50
C297, C555		CCSRCH470J50
C241		CCSRCH560J50
C107, C360		CCSRCH681J50
C489		CCSRCH8R0D50
C123, C201, C233, C254		CEV101M16
C368, C369, C413, C414		CEV101M16
C103		CEV220M16
C205, C326, C401, C470, C472		CEV221M4
C701, C711, C745, C752, C766		CEV221M4
C781, C791, C793, C835, C891		CEV221M4
C903, C908		CEV221M4
C101		CEV470M6R3
C116, C127, C223, C224, C264		CKSQYB105K10
C312, C406, C407, C415, C416		CKSQYB105K10
C477, C794, C795		CKSQYB105K10
C216, C313, C351, C427, C531		CKSRYB102K50
C533, C534, C606, C617, C621		CKSRYB102K50
C703, C748, C831, C925, C926		CKSRYB102K50
C951		CKSRYB102K50
C110, C113, C203, C220, C225		CKSRYB103K50
C234, C261, C320–C322, C330		CKSRYB103K50
C404, C426, C619, C920		CKSRYB103K50
C108, C111, C114, C115		CKSRYB104K16
C212, C213, C227, C231		CKSRYB104K16
C248–C251, C255, C263, C315		CKSRYB104K16
C317		CKSRYB104K16
C106		CKSRYB152K50
C208		CKSRYB222K50
C266		CKSRYB224K10
C206, C214, C242, C357		CKSRYB472K50
C105, C118, C122, C253, C256		CKSRYF104Z25
C332, C353, C359, C365, C366		CKSRYF104Z25
C609, C622, C631, C723, C755		CKSRYF104Z25
C758, C761, C762, C767, C768		CKSRYF104Z25
C836, C840, C848, C849		CKSRYF104Z25
C895–C899, C902, C933, C939		CKSRYF104Z25
C112, C125, C126, C130, C200		CKSRYF105Z10
C202, C204, C215, C217		CKSRYF105Z10
C221, C222, C226, C230, C232		CKSRYF105Z10
C236, C258, C265, C299, C310		CKSRYF105Z10
C319, C323, C328, C329, C409		CKSRYF105Z10
C412, C418, C423, C428		CKSRYF105Z10
C475, C476, C493, C494		CKSRYF105Z10
C552–C554, C556, C602–C605		CKSRYF105Z10
C607, C608, C610, C613–C616		CKSRYF105Z10
C618, C657, C658, C704		CKSRYF105Z10
C706–C710, C712–C716		CKSRYF105Z10
C718–C722, C724–C732, C735		CKSRYF105Z10
C741–C744, C746, C747		CKSRYF105Z10
C753, C754, C756, C757		CKSRYF105Z10
C759, C760, C763–C765		CKSRYF105Z10
C769–C780, C782–C790, C792		CKSRYF105Z10
C797, C832–C834, C837–C839		CKSRYF105Z10
C842–C846, C893, C900, C901		CKSRYF105Z10
C904–C907, C909–C918		CKSRYF105Z10
C921–C924, C927–C930		CKSRYF105Z10
C956, C957		CKSRYF105Z10
C117, C128, C422 (100/6.3)		VCH1194
C119, C421, C424, C601 (150/4)		VCH1195
C623, C702, C751 (150/4)		VCH1195
C403, C405 (47/16)		VCH1210
C411, C419 (100/6.3)		VCH1211

RESISTORS

Mark No.	Description	Part No.
R831, R832		RAB4C0R0J
R924–R927		RAB4C101J
R631, R713		RAB4C103J
R111		RAB4C220J
R113, R534, R537, R704, R705		RAB4C470J
R138		RS1/10S0R0J
R341		RS1/10S101J
R141–R148		RS1/10S220J
R364, R369, R373, R375		RS1/16S1003F
R123		RS1/16S1202F
R843, R855		RS1/16S1501F
R358, R361		RS1/16S1503F
R755		RS1/16S1801F
R936, R944, R950, R966, R973		RS1/16S3000F
R978		RS1/16S3000F
R754		RS1/16S3001F
R751		RS1/16S3301F
R132		RS1/16S4702F
R357, R362, R363, R368, R372		RS1/16S6802F
R374		RS1/16S6802F
R257 (R=1.0)		VCN1127
R258, R259 (R=2.2)		VCN1128
Other Resistors		RS1/16S###J

OTHERS

Mark No.	Description	Part No.
CN401	PH CONNECTER	S13B-PH-SM3
CN103	CONNECTOR	S5B-PH-SM3
9006	FLEXIBLE CABLE	VDA1681
CN114	4P CONNECTOR	VKN1409
CN115	12P CONNECTOR	VKN1416
CN402	17P CONNECTOR	VKN1421
CN551	21P CONNECTOR	VKN1425
CN701	24P CONNECTOR	VKN1428
CN901	30P CONNECTOR	VKN1434
CN502	20P CONNECTOR	VKN1460
CN111	26P CONNECTOR	VKN1790
CN531	FFC CONNECT0R	VKN1794
KN1, KN2	EARTH METAL FITTING	VNF1109
X481 (27.000MHz)		VSS1159
X601 (16.5MHz)		VSS1160

B DVDM ASSY [VWS1534]

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC831		ADV7300AKST
	IC261, IC302		BA4510F
	IC251		BA6664FM
	IC741, IC901		HY57V161610DTC-8
	IC101		LA9704W
	IC201		LC78652W
	IC781		M2V64S40DTP-7
	IC351		M56788AFP
	IC751		M65776AFP
⚠	IC404		MM1385EN
⚠	IC791		MM1561JF
⚠	IC402		MM1565AF
	IC552		PD0274A
	IC601		PD6345A
	IC701		PE5286A
	IC491		PE9015B
	IC902		PM0033A
⚠	IC403		PQ025EZ01ZP
	IC481		SM8707HV
	IC786		TC74VHC541FT
	IC303, IC304, IC306		TC7SZU04F
	IC553		TC7WH157FU
	IC211		TK15404M
	IC603		VYW2045
	Q210, Q932–Q934, Q936		2SA1576A
	Q938, Q939		2SA1576A
	Q241		DTC114EUA
	Q101, Q102, Q106		HN1A01F
	Q103, Q104		HN1B04FU
	Q931		RN1911
	Q601, Q941		RN4982
	D302, D303		KV1470
	D401, D402		RB051L-40
	D601		RB501V-40

COILS AND FILTERS

Mark	No.	Description	Part No.
	L304		LCYA1R2J2520
	L4080, L4090, L4100	CHIP BEADS	VTL1074
	L4110, L4120	CHIP BEADS	VTL1074
	L4130, L4880	CHIP BEADS	VTL1074
	L4910, L652	CHIP BEADS	VTL1074
	L4720	CHIP BEADS	VTL1079
	L4710	CHIP BEADS	VTL1081
	L4800, L481	CHIP BEADS	VTL1084

CAPACITORS

Mark	No.	Description	Part No.
	C480, C481, C662		CCSRCH100D50
	C121, C532, C6270, C950		CCSRCH101J50
	C953–C955		CCSRCH101J50
	C314, C474, C798		CCSRCH150J50
	C100, C133		CCSRCH151J50
	C120		CCSRCH181J50
	C484, C485, C487, C667		CCSRCH220J50
	C134, C324, C391, C392		CCSRCH331J50
	C945, C946		CCSRCH331J50
	C109		CCSRCH391J50
	C297, C555		CCSRCH470J50
	C241		CCSRCH560J50
	C107, C360		CCSRCH681J50
	C489		CCSRCH8R0D50
	C123, C201, C233, C254		CEV101M16
	C368, C369, C413, C414		CEV101M16
	C103		CEV220M16
	C205, C326, C401, C470, C472		CEV221M4
	C701, C711, C745, C752, C766		CEV221M4
	C781, C791, C793, C835, C891		CEV221M4
	C903, C908		CEV221M4
	C101		CEV470M6R3
	C116, C127, C223, C224, C264		CKSQYB105K10
	C312, C406, C407, C415, C416		CKSQYB105K10
	C477, C794, C795		CKSQYB105K10
	C216, C313, C351, C427, C531		CKSRYB102K50
	C533, C534, C606, C617, C621		CKSRYB102K50
	C703, C748, C831, C925, C926		CKSRYB102K50
	C951		CKSRYB102K50
	C110, C113, C203, C220, C225		CKSRYB103K50
	C234, C261, C320–C322, C330		CKSRYB103K50
	C404, C426, C619, C920		CKSRYB103K50
	C108, C111, C114, C115		CKSRYB104K16
	C212, C213, C227, C231		CKSRYB104K16
	C248–C251, C255, C263, C315		CKSRYB104K16
	C317		CKSRYB104K16
	C106		CKSRYB152K50
	C208		CKSRYB222K50
	C266		CKSRYB224K10
	C206, C214, C242, C357		CKSRYB472K50
	C105, C118, C122, C253, C256		CKSRYF104Z25
	C332, C353, C359, C365, C366		CKSRYF104Z25
	C609, C622, C631, C723, C755		CKSRYF104Z25
	C758, C761, C762, C767, C768		CKSRYF104Z25
	C836, C840, C848, C849		CKSRYF104Z25
	C895–C899, C902, C933, C939		CKSRYF104Z25
	C112, C125, C126, C130, C200		CKSRYF105Z10
	C202, C204, C215, C217		CKSRYF105Z10
	C221, C222, C226, C230, C232		CKSRYF105Z10
	C236, C258, C265, C299, C310		CKSRYF105Z10
	C319, C323, C328, C329, C409		CKSRYF105Z10
	C412, C418, C423, C428		CKSRYF105Z10
	C475, C476, C493, C494		CKSRYF105Z10
	C552–C554, C556, C602–C605		CKSRYF105Z10
	C607, C608, C610, C613–C616		CKSRYF105Z10
	C618, C657, C658, C704		CKSRYF105Z10
	C706–C710, C712–C716		CKSRYF105Z10
	C718–C722, C724–C732, C735		CKSRYF105Z10
	C741–C744, C746, C747		CKSRYF105Z10
	C753, C754, C756, C757		CKSRYF105Z10
	C759, C760, C763–C765		CKSRYF105Z10
	C769–C780, C782–C790, C792		CKSRYF105Z10
	C797, C832–C834, C837–C839		CKSRYF105Z10
	C842–C846, C893, C900, C901		CKSRYF105Z10
	C904–C907, C909–C918		CKSRYF105Z10
	C921–C924, C927–C930		CKSRYF105Z10
	C956, C957		CKSRYF105Z10
	C117, C128, C422 (100/6.3)		VCH1194
	C119, C421, C424, C601 (150/4)		VCH1195
	C623, C702, C751 (150/4)		VCH1195
	C403, C405 (47/16)		VCH1210
	C411, C419 (100/6.3)		VCH1211

RESISTORS

Mark	No.	Description	Part No.
	R831, R832		RAB4C0R0J

Mark	No.	Description	Part No.
	R924–R927		RAB4C101J
	R631, R713		RAB4C103J
	R111		RAB4C220J
	R113, R534, R537, R704, R705		RAB4C470J
	R138		RS1/10S0R0J
	R341		RS1/10S101J
	R141–R148		RS1/10S220J
	R364, R369, R373, R375		RS1/16S1003F
	R123		RS1/16S1202F
	R843, R855		RS1/16S1501F
	R358, R361		RS1/16S1503F
	R755		RS1/16S1801F
	R936, R944, R950, R966, R973		RS1/16S3000F
	R978		RS1/16S3000F
	R754		RS1/16S3001F
	R751		RS1/16S3301F
	R132		RS1/16S4702F
	R357, R362, R363, R368, R372		RS1/16S6802F
	R374		RS1/16S6802F
	R257 (R=1.0)		VCN1127
	R258, R259 (R=2.2)		VCN1128
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN401	PH CONNECTER	S13B-PH-SM3
	CN103	CONNECTOR	S5B-PH-SM3
	9006	FLEXIBLE CABLE	VDA1681
	CN114	4P CONNECTOR	VKN1409
	CN115	12P CONNECTOR	VKN1416
	CN402	17P CONNECTOR	VKN1421
	CN551	21P CONNECTOR	VKN1425
	CN701	24P CONNECTOR	VKN1428
	CN901	30P CONNECTOR	VKN1434
	CN502	20P CONNECTOR	VKN1460
	CN111	26P CONNECTOR	VKN1790
	CN531	FFC CONNECTOR	VKN1794
	KN1, KN2	EARTH METAL FITTING	VNF1109
	X481 (27.000MHz)		VSS1159
	X601 (16.5MHz)		VSS1160

C JACB ASSY [VWV1917]

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC401, IC501		DSD1702EG
	IC701		LA73054
	IC302–IC305, IC402, IC502		NJM5532MD
⚠	IC102		NJM78M05FA
⚠	IC101		NJM78M08FA
	IC301		PCM1738EG-3
⚠	IC702		PQ05RD11
	IC201		TC74VHC157F
	IC202		TC7SH08F
	IC203		TC7SHU04F
	Q312, Q322, Q432, Q532, Q534		2SA1037K
	Q601, Q701, Q801, Q802		2SC2412K
	Q350–Q352, Q360–Q362, Q410		2SD2114K
	Q420, Q510, Q520		2SD2114K
	Q201, Q310, Q311, Q320, Q321		DTC114YK
	Q430, Q431, Q530, Q531, Q533		DTC114YK
	D701–D713, D801, D802		1SS355
	D380		UDZS6.2B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L701, L702	CHIP BEADS	VTL1089

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY701, RY702		VSR1017

CAPACITORS

Mark	No.	Description	Part No.
	C307, C406, C506		CCSRCH331J50
	C115, C116, C118–C120, C801		CCSRCH470J50
	C702, C721		CEAT101M16
	C701, C741, C742, C751, C753		CEAT102M6R3
	C761		CEAT102M6R3
	C725, C762, C763		CEAT471M6R3
	C110		CEHAZA471M6R3
	C605		CEJQ101M16
	C604		CEJQ1R0M50
	C411, C421, C511, C521		CKSRYB272K50
	C117, C407, C413, C423, C507		CKSRYF104Z25
	C513, C523, C704, C711–C716		CKSRYF104Z25
	C732, C733, C752, C754, C803		CKSRYF104Z25
	C111, C112, C114, C202, C204		CKSRYF105Z10
	C302, C403, C503, C601, C606		CKSRYF105Z10
	C703, C722–C724, C726, C805		CKSRYF105Z10
	C334, C336, C344, C346 (470P)		VCE1035
	C330, C331, C340, C341 (4700P)		VCE1046
	C310, C311, C320, C321 (2200P)		VCE1048
	C412, C422 (1608CH330P)		VCH1226
	C512, C522 (1608CH330P)		VCH1226
	C350, C360, C414 (C= 47)		VCH1236
	C424, C514, C524 (C= 47)		VCH1236
	C101, C103, C314 (C= 100)		VCH1237
	C324, C338 (C= 100)		VCH1237
	C372, C380, C401 (C= 100)		VCH1237
	C410, C416 (C= 100)		VCH1237
	C420, C501, C510 (C= 100)		VCH1237
	C516, C520 (C= 100)		VCH1237
	C107, C109, C201 (C= 330)		VCH1239
	C301, C303 (C= 330)		VCH1239
	C402, C502 (C= 330)		VCH1239
	C305, C306, C405, C505 (C= 47)		VCH1240

RESISTORS

Mark	No.	Description	Part No.
	R330, R331, R334, R335		RN1/16SE1001D
	R340, R341, R344, R345		RN1/16SE1001D
	R301		RN1/16SE1602D
	R310, R311, R320, R321		RN1/16SE2000D
	R410, R420, R510, R520		RN1/16SE2201D
	R332, R333, R342, R343		RN1/16SE3001D
	R411, R418, R421, R427, R511		RN1/16SE8201D
	R518, R521, R527		RN1/16SE8201D
	R1101		RS1/10S0R0J
	R751, R752, R754, R755		RS1/16S75R0F
	R757–R761		RS1/16S75R0F
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN705	SOCKET	AKP7012
	JA602	OPT. LINK OUT	GP1FA502TZ
	JA801, JA802	JACK	RKN1004
		PCB BINDER	VEF1040
	JA302	JACK	VKB1125
	JA301	JACK	VKB1133

Mark	No.	Description	Part No.
	JA703	JACK	VKB1135
	JA702	JACK	VKB1151
	JA601	JACK	VKB1160
	CN702	19P CONNECTOR	VKN1250
	CN101	21P CONNECTOR	VKN1252
	CN701	30P CONNECTOR	VKN1261
	CN801	7P CONNECTOR	VKN1267
	CN102	19P CONNECTOR	VKN1775
	KN101	EARTH METAL FITTING	VNF1084
	KN102	EARTH METAL FITTING	VNF1084

C JACB ASSY [VWV1919]

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC401, IC501		DSD1702EG
	IC701		LA73054
	IC302–IC305, IC402, IC502		NJM5532MD
⚠	IC102		NJM78M05FA
⚠	IC101		NJM78M08FA
	IC301		PCM1738EG-3
⚠	IC702		PQ05RD11
	IC201		TC74VHC157F
	IC202		TC7SH08F
	IC203		TC7SHU04F
	Q312, Q322, Q432, Q532, Q534		2SA1037K
	Q601, Q801, Q802		2SC2412K
	Q350, Q351, Q360, Q361, Q410		2SD2114K
	Q420, Q510, Q520		2SD2114K
	Q201, Q310, Q311, Q320, Q321		DTC114YK
	Q430, Q431, Q530, Q531, Q533		DTC114YK
	D701–D712, D801, D802		1SS355
	D380		UDZS6.2B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L701–L704	CHIP BEADS	VTL1089

CAPACITORS

Mark	No.	Description	Part No.
	C307, C406, C506		CCSRCH331J50
	C115, C116, C118–C120, C801		CCSRCH470J50
	C702, C721		CEAT101M16
	C701, C741, C742, C751, C753		CEAT102M6R3
	C761, C771		CEAT102M6R3
	C725, C762, C763, C772, C775		CEAT471M6R3
	C110		CEHAZA471M6R3
	C605		CEJQ101M16
	C604		CEJQ1R0M50
	C411, C421, C511, C521		CKSRYB272K50
	C117, C407, C413, C423, C507		CKSRYF104Z25
	C513, C523, C704, C711–C716		CKSRYF104Z25
	C752, C754, C803		CKSRYF104Z25
	C111, C112, C114, C202, C204		CKSRYF105Z10
	C302, C403, C503, C601, C606		CKSRYF105Z10
	C703, C722–C724, C726, C805		CKSRYF105Z10
	C334, C336, C344, C346 (470P)		VCE1035
	C330, C331, C340, C341 (4700P)		VCE1046
	C310, C311, C320, C321 (2200P)		VCE1048
	C412, C422 (1608CH330P)		VCH1226
	C512, C522 (1608CH330P)		VCH1226
	C350, C360, C414 (C= 47)		VCH1236
	C424, C514, C524 (C= 47)		VCH1236
	C101, C103, C314 (C= 100)		VCH1237
	C324, C338 (C= 100)		VCH1237
	C372, C380, C401 (C= 100)		VCH1237
	C410, C416 (C= 100)		VCH1237
	C420, C501, C510 (C= 100)		VCH1237
	C516, C520 (C= 100)		VCH1237
	C107, C109, C201 (C= 330)		VCH1239
	C301, C303 (C= 330)		VCH1239
	C402, C502 (C= 330)		VCH1239
	C305, C306, C405, C505 (C= 47)		VCH1240

RESISTORS

Mark	No.	Description	Part No.
	R330, R331, R334, R335		RN1/16SE1001D
	R340, R341, R344, R345		RN1/16SE1001D
	R301		RN1/16SE1602D
	R310, R311, R320, R321		RN1/16SE2000D
	R410, R420, R510, R520		RN1/16SE2201D
	R332, R333, R342, R343		RN1/16SE3001D
	R411, R418, R421, R427, R511		RN1/16SE8201D
	R518, R521, R527		RN1/16SE8201D
	R1101		RS1/10S0R0J
	R751, R752, R754, R755		RS1/16S75R0F
	R757–R761, R764–R766		RS1/16S75R0F
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN705	SOCKET	AKP7012
	CN703	SOCKET(14P)	AKP7137
	JA602	OPT. LINK OUT	GP1FA502TZ
	JA801, JA802	JACK	RKN1004
		PCB BINDER	VEF1040
	JA302	JACK	VKB1125
	JA301	JACK	VKB1133
	JA703	JACK	VKB1135
	JA702	JACK	VKB1151
	JA601	JACK	VKB1160
	CN101	21P CONNECTOR	VKN1252
	CN701	30P CONNECTOR	VKN1261
	CN801	7P CONNECTOR	VKN1267
	CN102	19P CONNECTOR	VKN1775
	KN101	EARTH METAL FITTING	VNF1084
	KN102	EARTH METAL FITTING	VNF1084

D SACDB ASSY [VWG2353]

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC906		BA25BC0FP
	IC901		CXD2753R
	IC902		HY57V161610DTC-8
⚠	IC808		MM1561JF
	IC904		TC7SH00FU
	IC806		TC7SH04FU
	IC991		TC7SHU04F
	IC905		TC7WH74FU
	IC801		XCA56367PV150

COILS AND FILTERS

Mark	No.	Description	Part No.
	L801		LCYA1R0J2520
	L971–L979	CHIP BEADS	VTL1074

CAPACITORS

Mark	No.	Description	Part No.
	C903		CCSRCH100D50
	C950		CCSRCH102J50
	C931		CCSRCH470J50
	C801, C829, C839, C840, C844		CEJQ221M6R3

Mark No.	Description	Part No.
C901, C909, C911, C922, C926		CEJQ221M6R3
C944, C951		CEJQ221M6R3
C828, C908, C916		CKSRYB103K50
C827		CKSRYB473K25
C807–C812, C815, C816		CKSRYF105Z10
C819–C824, C826, C830–C837		CKSRYF105Z10
C841, C843, C902, C905–C907		CKSRYF105Z10
C912–C915, C917–C921		CKSRYF105Z10
C923–C925, C927–C930, C934		CKSRYF105Z10
C937, C938, C940, C943		CKSRYF105Z10
C945–C947, C955, C956, C991		CKSRYF105Z10

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN902	19P CONNECTOR	19R-1.25FJ
	PCB BINDER	VEF1040
CN903	13P CONNECTOR	VKN1417
CN801	20P CONNECTOR	VKN1460
CN901	FFC CONNECTOR	VKN1794

E FLKY ASSY [VWG2358]

SEMICONDUCTORS

IC101		PE5314B
IC102		PST3228
Q103, Q105		2SA1602A
Q104		2SC2412K
Q102		DTA124EK
Q101		DTC124EK

SWITCHES AND RELAYS

S101–S106		ASG7013

CAPACITORS

C101, C103, C107, C108, C161		CCSRCH102J50
C104		CEAL470M6R3
C100		CEJQ101M6R3
C111		CKSRYB103K50
C116		CKSRYF104Z50
C102, C105, C110, C113, C115		CKSRYF105Z10

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN102	CONNECTOR 9P	09P-FJ
IC103	REMOTE RECEIVER UNIT	SPS-452L-H
V101	FL TUBE	VAW1073
	SPACER	VEC2220
CN101	17P CONNECTOR	VKN1277
	HOLDER	VNF1122
X101	(5MHz)	VSS1142

E FLKY ASSY [VWG2360]

SEMICONDUCTORS

IC101		PE5314B
IC102		PST3228
Q103, Q105		2SA1602A
Q104		2SC2412K
Q102		DTA124EK
Q101		DTC124EK

Mark No.	Description	Part No.

SWITCHES AND RELAYS

S101–S106		ASG7013

CAPACITORS

C101, C103, C107, C108, C161		CCSRCH102J50
C104		CEAL470M6R3
C100		CEJQ101M6R3
C111		CKSRYB103K50
C116		CKSRYF104Z50
C102, C105, C110, C113, C115		CKSRYF105Z10

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN102	CONNECTOR 9P	09P-FJ
IC103	REMOTE RECEIVER UNIT	SPS-452L-H
V101	FL TUBE	VAW1073
	SPACER	VEC2220
CN101	17P CONNECTOR	VKN1277
	HOLDER	VNF1122
X101	(5MHz)	VSS1142

F KEYB ASSY [VWG2369]

SEMICONDUCTORS

D205		NSPB500-0008
D201, D203, D204		SLR-343VC
D211		UDZS6.2B

SWITCHES AND RELAYS

S201, S202		ASG7013

CAPACITORS

C291, C292		CKSRYB103K50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN201	CONNECTOR 9P	09R-FJ
CN202	CONNECTOR	S2B-PH-K

G POWER SUPPLY UNIT [VWR1361]

OTHERS

⚠ P103	PROTECTOR(1.6A)	AEK7012
⚠ P101	PROTECTOR(800mA)	AEK7063
⚠ P102	PROTECTOR(1.6A)	AEK7066
⚠ P104	PROTECTOR(2A)	AEK7067
⚠ F1	FUSE(2A)	REK1101

H SCRB ASSY [VWV1922]

SEMICONDUCTORS

IC901		MM1505XN
IC902, IC903		MM1507XN
Q901, Q904		2SA1037K
Q902, Q905		2SC2412K
D921		1SR154-400
D901, D904–D909, D911, D912		1SS355
D914–D916		1SS355
D918, D920		DA204K
D917, D919		UDZS5.6B

SWITCHES AND RELAYS

Mark No.	Description	Part No.
	RY901–RY905	VSR1017

CAPACITORS

Mark No.	Description	Part No.
	C904, C914, C932, C933	CCSRCH221J50
	C903, C910, C913, C921	CCSRCH391J50
	C927	CCSRCH470J50
	C929, C930, C937, C943	CEAT101M10
	C946, C953	CEAT102M6R3
	C901, C902, C907, C909	CKSRYF104Z25
	C916, C917, C924, C925, C928	CKSRYF104Z25
	C935, C936, C938–C941, C945	CKSRYF104Z25
	C950, C956–C959	CKSRYF104Z25

RESISTORS

Mark No.	Description	Part No.
	R932, R937, R943, R950, R955	RS1/16S75R0F
	R965	RS1/16S75R0F
	Other Resistors	RS1/16S###J

OTHERS

Mark No.	Description	Part No.
	JA901, JA902 CONNECTOR	VKB1157
	CN901 19P CONNECTOR	VKN1279

I ILKB ASSY [VWG2391]

SEMICONDUCTORS

Mark No.	Description	Part No.
	IC203	BU2370FV
	IC204	NJU7093AF
	IC101	PD5787A
	IC301	TC74VHC541FT
	IC306, IC308	TC7SH04FU
	IC205, IC302, IC309	TC7SH08FU
	IC201	TSB43CA43GGW
	IC202	VYW2019
	D261	RB501V-40

COILS AND FILTERS

Mark No.	Description	Part No.
	L201–L204 (330uH)	VTH1043

CAPACITORS

Mark No.	Description	Part No.
	C421, C423–C425	CCSRCH101J50
	C208	CCSRCH102J50
	C205	CCSRCH150J50
	C204	CCSRCH180J50
	C283, C284	CCSRCH221J50
	C411	CEV101M16
	C231, C261, C270, C277	CEV470M6R3
	C404	CKSQYB102K50
	C403	CKSQYF105Z16
	C307, C422, C426	CKSRYB102K50
	C279	CKSRYB103K50
	C206	CKSRYB104K16
	C275, C278	CKSRYB105K6R3
	C274	CKSRYB683K16
	C152, C207, C210, C216, C219	CKSRYF104Z25
	C285, C286	CKSRYF104Z25
	C101, C103, C104, C151, C203	CKSRYF105Z10
	C209, C211, C213–C215	CKSRYF105Z10
	C217, C218, C220–C223, C232	CKSRYF105Z10
	C262, C271–C273, C276	CKSRYF105Z10
	C281, C282, C301, C302, C306	CKSRYF105Z10
	C308, C309, C402, C412	CKSRYF105Z10
	C102, C202, C212, C401, C405 (150/4)	VCH1195

RESISTORS

Mark No.	Description	Part No.
	R116–R119, R129, R220–R223	RAB4C0R0J
	R335, R339, R340	RAB4C0R0J
	R110, R212, R219, R256	RAB4C103J
	R349, R350, R353, R363	RAB4C103J
	R289, R290	RS1/16S5101F
	R281–R288	RS1/16S56R0D
	R206	RS1/16S6341D
	Other Resistors	RS1/16S###J

OTHERS

Mark No.	Description	Part No.
	X201 (24.5760MHz)	ASS7025
	CN103 07P CONNECTOR	RKN1048
	CN102 13P CONNECTOR	VKN1417
	CN101 24P CONNECTOR	VKN1428
	JA1, JA2 1394-TERMINAL	VKN1800
	X101 (6.14MHz)	VSS1179

J MSWB ASSY [VWG2390]

SWITCHES AND RELAYS

Mark No.	Description	Part No.
⚠	S301	VSA1005

CAPACITORS

Mark No.	Description	Part No.
⚠	C301 (C=10000p, V= AC250V)	ACG7033

OTHERS

Mark No.	Description	Part No.
	CN301 CONNECTOR POST	B2B-PH-K
	CN302 AMP U-P CONNECTOR	RKP1834

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

① Tangential and Radial Height Coarse Adjustment

② DVD Jitter Adjustment

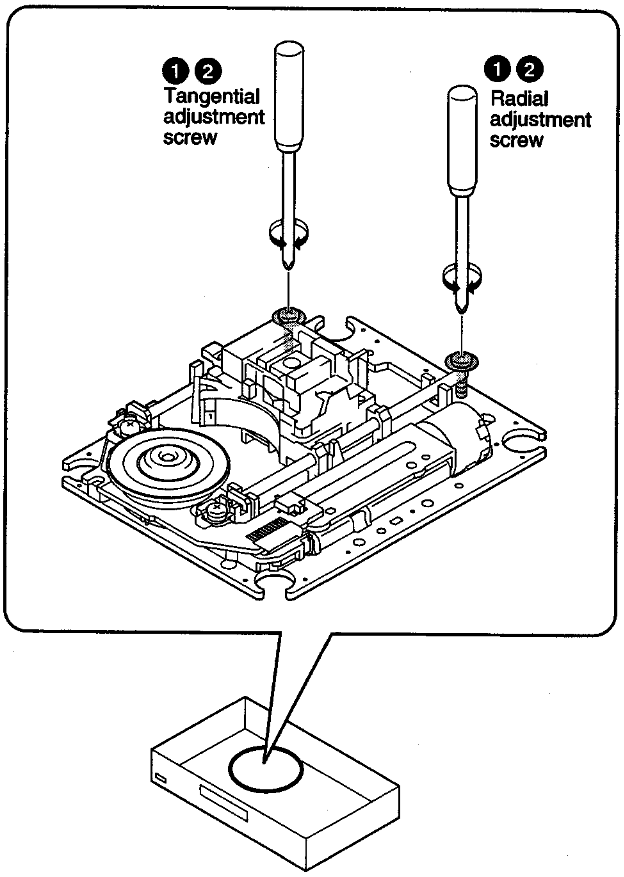
③ Initialize the Focus Sweep Setting

[Electrical Part]

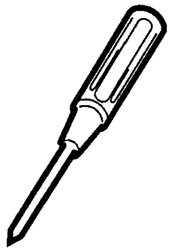
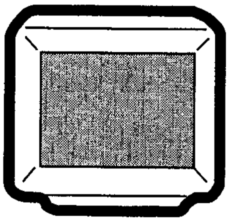
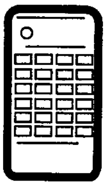
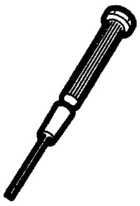
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.2 JIGS AND MEASURING INSTRUMENTS

 ⊕ Screwdriver (large)	 ⊕ Screwdriver (medium)	 TV monitor	 Test mode remote control unit (GGF1067)
 ⊕ Precise screwdriver	 DVD test disc (GGV1025)	Screw tight (GYL1001)	

6.3 NECESSARY ADJUSTMENT POINTS

■ Exchange Parts of Mechanism Assy

When		Adjustment Points
Exchange the Pickup	Mechanical point	❶, ❷, ❸ * After adjustment, screw locks with the Screw tight.
	Electric point	————
Exchange the Traverse Mechanism	Mechanical point	❸
	Electric point	————
Exchange the Spindle Motor	Mechanical point	❷, ❸ * After adjustment, screw locks with the Screw tight.
	Electric point	————

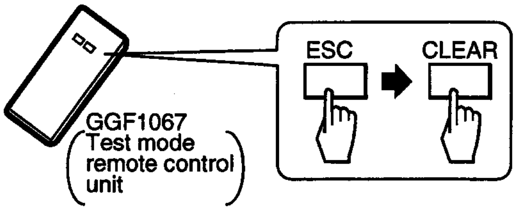
■ Exchange PCB Assy

When		Adjustment Points
Exchange PC Board LOAB, DVDM ASSY	Mechanical point	————
	Electric point	————

*

Purpose: To set the sweep which was correct with the individual Traverse mechanism.

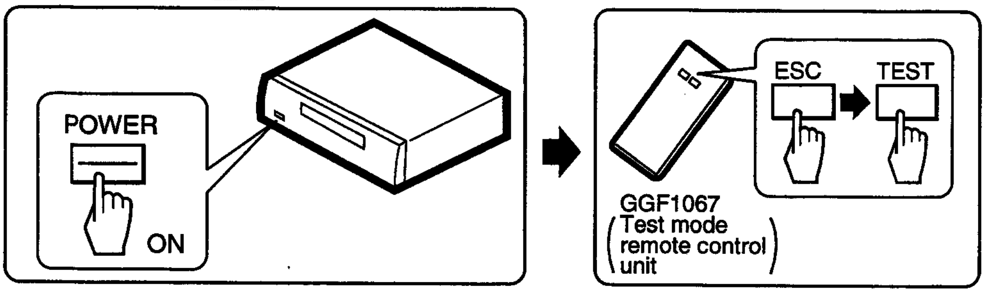
Be sure to perform the following step finally when replaced Pickup, Traverse Mechanism and Spindle Motor.



(It is necessary when performed adjustment procedure ❷.)

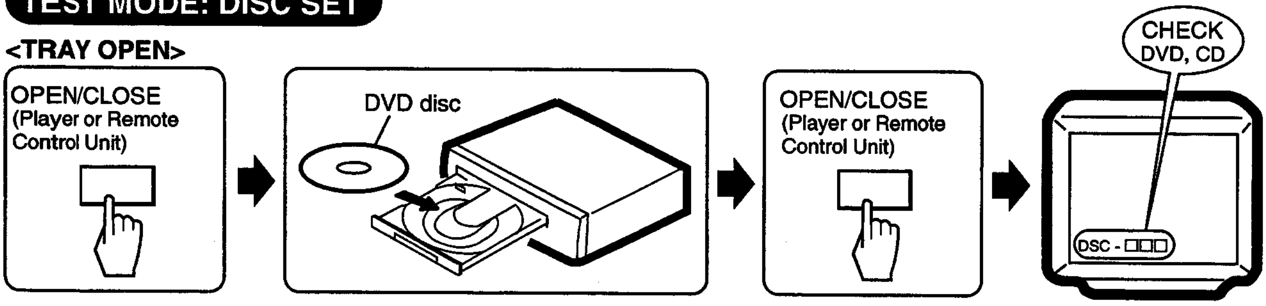
6.4 TEST MODE

TEST MODE: ON


POWER
ON
ESC
TEST
GGF1067
(Test mode remote control unit)

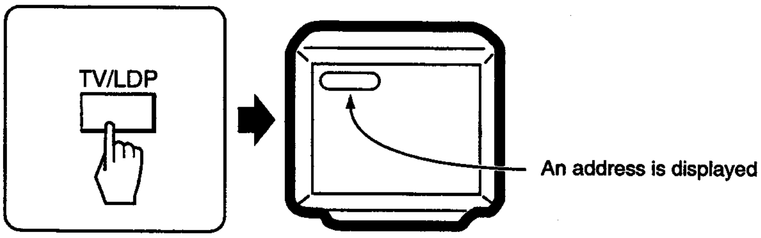
TEST MODE: DISC SET

<TRAY OPEN>


OPEN/CLOSE
(Player or Remote Control Unit)
DVD disc
OPEN/CLOSE
(Player or Remote Control Unit)
CHECK
DVD, CD
DSC - □□□

TEST MODE: PLAY

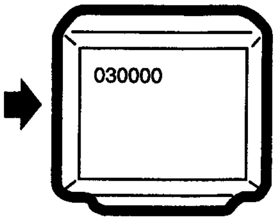
<PLAY>


TV/LDP
An address is displayed

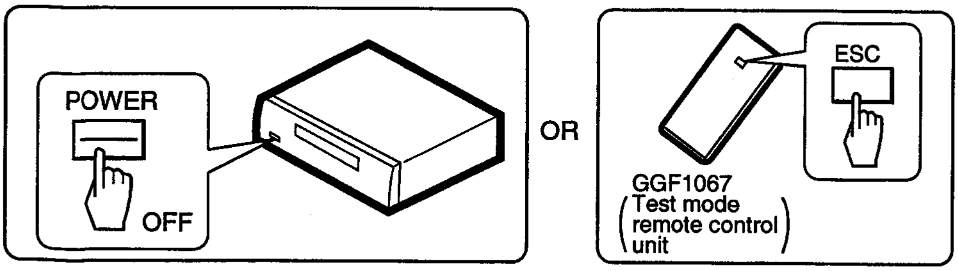
< When playback with the target address of disc (DVD)>

For example, when playback with # 30000

During PLAY +10 → 3 → 0 → 0 → 0 → 0 → CHP/TIM Press keys in order



TEST MODE: OFF

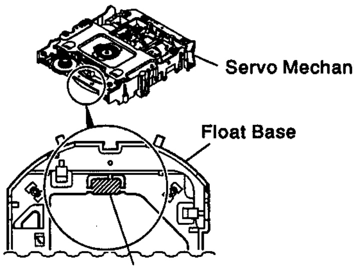

POWER
OFF
OR
ESC
GGF1067
(Test mode remote control unit)

6.5 MECHANISM ADJUSTMENT

❶ Tangential and Radial Height Coarse Adjustment

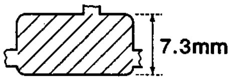
START

- Remove the servo mechanism.
- Remove a Spacer for height adjustment attached to the back side (shaded area) of the Servo Mechanism (Float Base) with nippers.

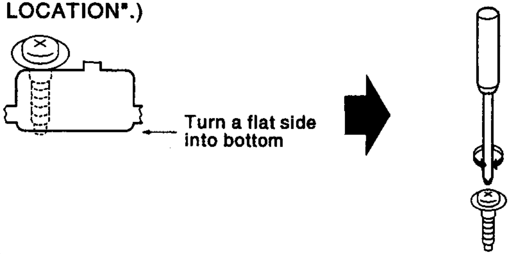

Servo Mechanism
Float Base
Spacer for Height adjustment

Note:
Turn the Short switch to Short side when removing the Pickup Flexible Cable. (Refer to "7.1.9 DISASSEBLY".)

Cautions:
Because there is not a Spacer for height adjustment in adjustment after the second time, will keep it at need.
(This parts is Traverse mechanism exclusive use of a model for 2001 years)



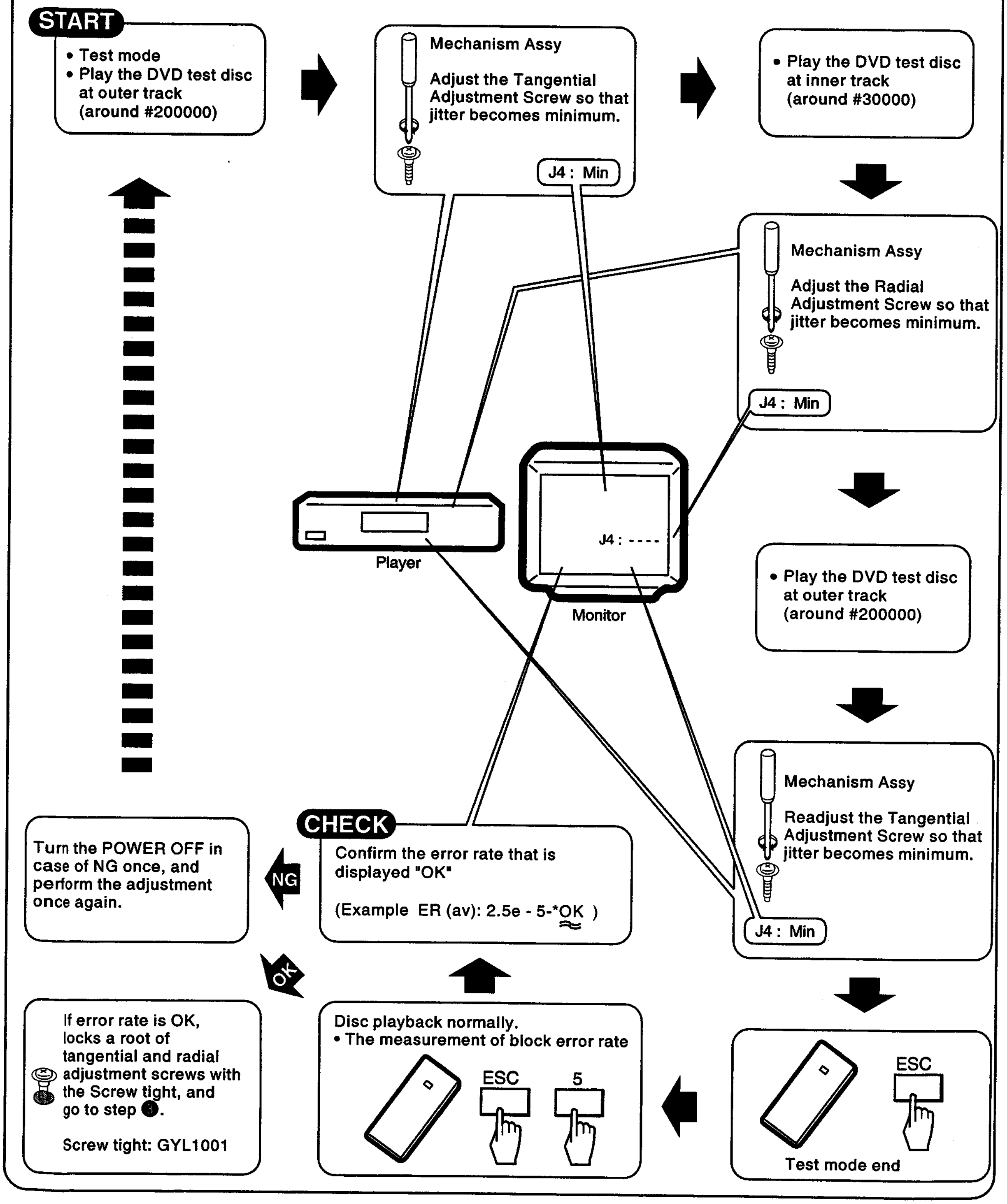
Put a spacer between a Tangential (or Radial) adjustment screw and Mechanism Base and turn each screw to adjust the height. (Refer to "6.1 ADJUSTMENT ITEMS AND LOCATION".)


Turn a flat side into bottom

❷ DVD Jitter Adjustment

- Playback method of inner and outer address for the purpose is refererd to "6.4 TEST MODE".
- Jitter indication of the monitor is refererd to "7.1.3 TEST MODE SCREEN DISPLAY".

Use disc: GGV1025



START

- Test mode
- Play the DVD test disc at outer track (around #200000)

Mechanism Assy

Adjust the Tangential Adjustment Screw so that jitter becomes minimum.

- Play the DVD test disc at inner track (around #30000)

Mechanism Assy

Adjust the Radial Adjustment Screw so that jitter becomes minimum.

- Play the DVD test disc at outer track (around #200000)

Mechanism Assy

Readjust the Tangential Adjustment Screw so that jitter becomes minimum.

Test mode end

Disc playback normally.

- The measurement of block error rate

CHECK

Confirm the error rate that is displayed "OK"

(Example ER (av): 2.5e - 5-*OK)

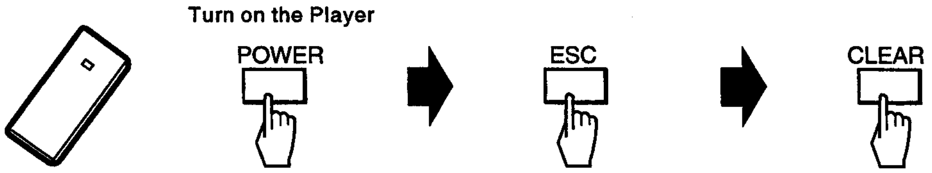
Turn the POWER OFF in case of NG once, and perform the adjustment once again.

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight, and go to step ❸.

Screw tight: GYL1001

③ Initialize the Focus Sweep Setting

Purpose: To set the sweep which was correct with the individual Traverse mechanism.


Turn on the Player
POWER
ESC
CLEAR

Note: Be sure to perform this step when replaced the Pickup or Traverse mechanism.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 ID NUMBER AND ID DATA SETTTING

■ Entering the ID Number and ID Data for Players with DVD-Audio and DVD-RW Compatibility

It is necessary with a player with DVD-audio and DVD-RW compatibility to set an individual number (ID number) and ID data. If the number and data are not set correctly with the following procedure, operations in the future may not be guaranteed. You will find the ID number to be set on the yellow label on the rear panel.

Important: If no yellow label is found on the rear panel, write down the specified ID number by checking it according to "How to confirm the ID number" shown below.

■ The Input is Necessary When:

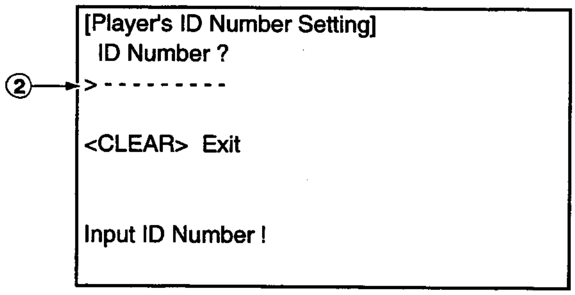
- Downloading FLASH-ROM is finished. (The latest version must be downloaded when a repair is made.)
- "No ID Number" is displayed on the screen or FL display immediately after the power is turned on or in Stop mode.
- If "No ID DATA" is displayed, the ID data must be entered.

Note:
Be sure to enter the ID number in Stop mode.
Use the service remote control (GGF1067) for operations. Only opening/closing of the tray are performed from the player.
Use Disc No. : GGV1084

■ How to Input the ID Number and ID Data

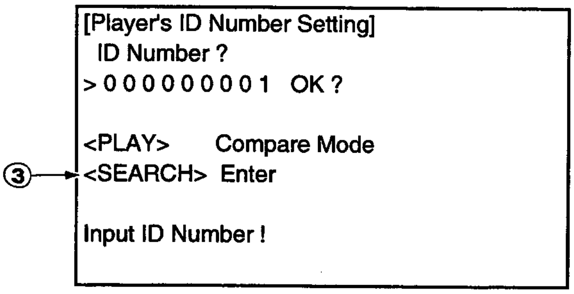
① To enter the input mode, press ESC + STEREO in a status with no ID number set, such as after FLASH-ROM downloading.

② As number input is enabled when the unit enters the input mode, input the 9-digit ID number.
(The entered number is also displayed on the FL display.)



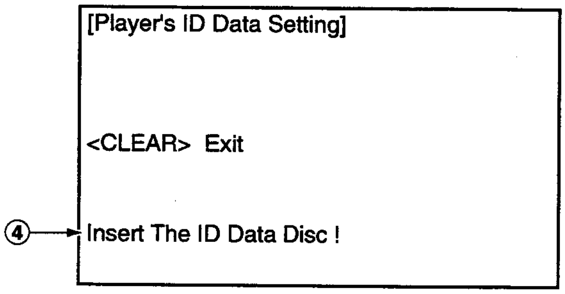
```
[Player's ID Number Setting]
  ID Number ?
>---------

<CLEAR>  Exit


Input ID Number !
```

③ After inputting the number, press SEARCH to register the ID number.



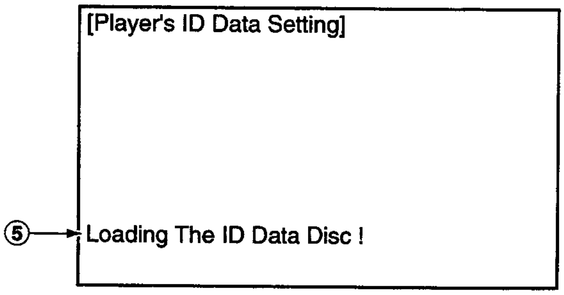
```
[Player's ID Number Setting]
  ID Number ?
>000000001  OK ?

<PLAY>     Compare Mode
<SEARCH>  Enter

Input ID Number !
```

④ When the ID number has been registered, the unit enters the ID data input mode. (The FL display indicates "NO ID DATA.") In this condition, place the ID data disc on the tray and close the tray using the CLOSE key "■/▲" on the player.



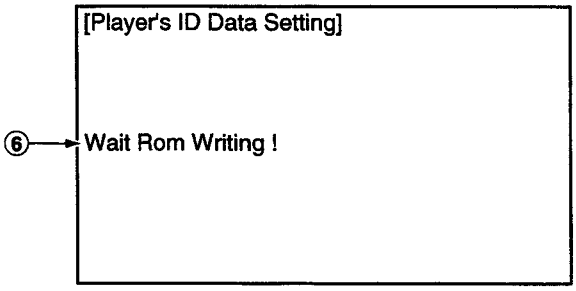
```
[Player's ID Data Setting]


<CLEAR>  Exit


Insert The ID Data Disc !
```

⑤ While the data are being read, the message shown in the figure at left is displayed on the screen.
(The FL display indicates "RD ID DATA.")



```
[Player's ID Data Setting]




Loading The ID Data Disc !
```

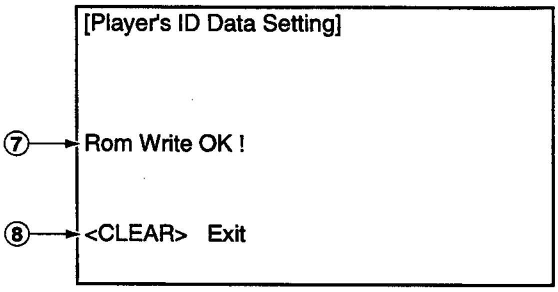
⑥ When the ID data have been read, the data are written to the FLASH-ROM.
(The FL display indicates "WR ID DATA.")



```
[Player's ID Data Setting]


Wait Rom Writing !
```

⑦ When the ID data have been written to the FLASH-ROM, the message "Rom Write OK" is displayed on the screen.
(The FL display indicates "ID DATA OK.")

⑧ After confirming this message, press CLEAR to exit the input mode.



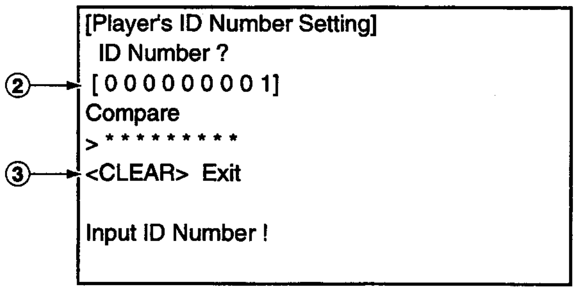
```
[Player's ID Data Setting]


Rom Write OK !


<CLEAR>   Exit
```

How to Confirm the ID Number

① Press ESC + STEREO with an ID number set, and the unit enters the ID number confirmation mode.

② The set ID number is displayed on the screen (and on the FL display), permitting you to confirm it.

③ To exit this mode, press CLEAR.

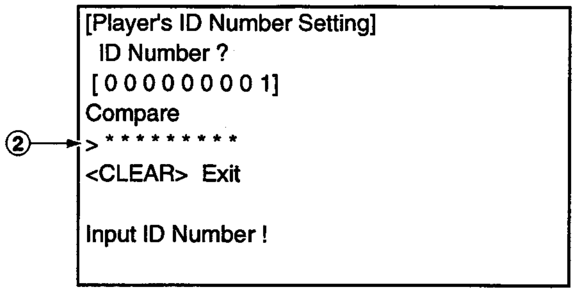


```
[Player's ID Number Setting]
  ID Number ?
 [0 0 0 0 0 0 0 0 1]
Compare
>*********
<CLEAR>  Exit

Input ID Number !
```

How to Clear the ID Number

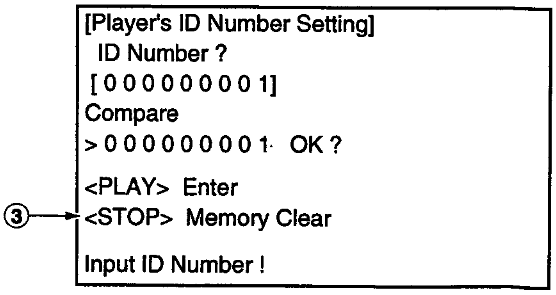
① Press ESC + STEREO with an ID number set, and the unit enters the ID number confirmation mode.

② Input the same number as the ID number you have set.



```
[Player's ID Number Setting]
  ID Number ?
 [0 0 0 0 0 0 0 0 1]
Compare
>*********
<CLEAR>  Exit

Input ID Number !
```

③ After inputting the number, press STOP.
Only when the entered number matches the set ID number, the ID number is cleared and the unit exits this mode.
If the numbers do not match, you must return to step 2.
(STOP is not accepted until 9 digits are entered.)



```
[Player's ID Number Setting]
  ID Number ?
 [0 0 0 0 0 0 0 0 1]
Compare
>0 0 0 0 0 0 0 0 1  OK ?
<PLAY>  Enter
<STOP>  Memory Clear
Input ID Number !
```

7.1.2 SELF-DIAGNOSIS FUNCTION OF PICKUP DEFECTIVE

This unit can confirm the laser diode current value (DVD: 650nm, CD: 780nm) of pickup on the Test Mode screen. (Press the ESC → TEST keys in order on the test mode remote control unit (GGF1067) to enter the test mode.)

It's effective in case of the following condition.

Symptom

- Indicates "No Disc" in FL display.
- Player does not playback, etc..

Procedure of Self-Diagnosis

① Enter the Test mode.

② When diagnosing the 650nm laser diode:
Press the TEST → 1 keys in order, and turn on the laser diode (It light-up for nine seconds.).
When diagnosing the 780nm laser diode:
Press the TEST → 4 keys in order, and turn on the laser diode (It light-up for nine seconds.).

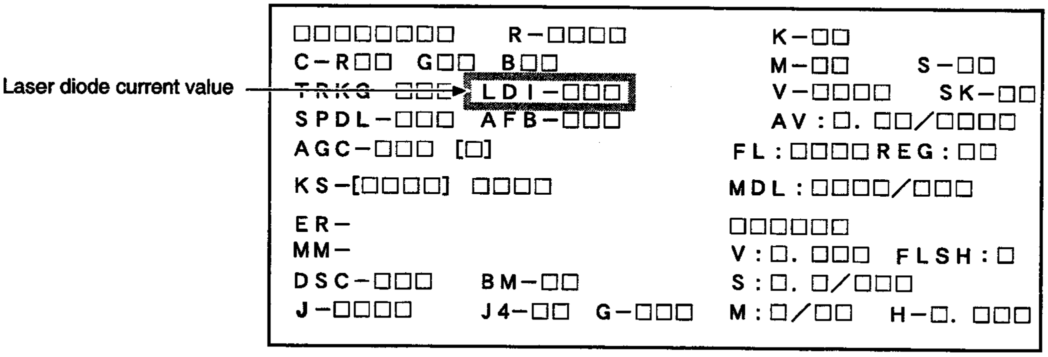
When let it turn on once again after performed ② once,
After pressed REP.B key once
650nm: Press the TEST → 1 keys in order
780nm: Press the TEST → 4 keys in order

③ Confirm the indicated value of the laser diode current (LDI). (Refer to following figure.)

④ **When indicated value is more than 100, pickup is defective. → Replacement is necessary**
Replace the Traverse Mechanism Assy or Pickup.

Note : When a DVD disc or a CD disc is played in the test mode, this function is effective.

Character in bold : Item name
□: Information display

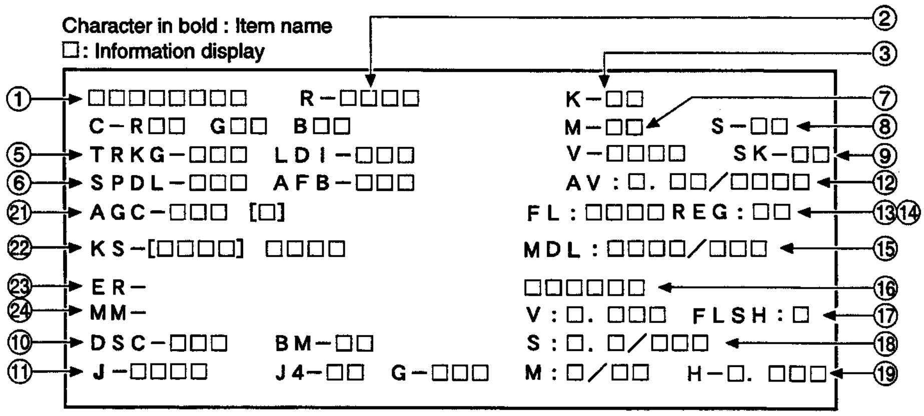


Laser diode current value

```
□□□□□□□□□    R－□□□□           K－□□
C－R□□  G□□  B□□              M－□□       S－□□
TRKG  □□□ LDI－□□□            V－□□□□     SK－□□
SPDL－□□□  AFB－□□□            AV : □. □□/□□□□
AGC－□□□  [□]                FL : □□□□REG : □□
KS－[□□□□]  □□□□             MDL : □□□□/□□□
ER－                         □□□□□□
MM－                         V : □. □□□   FLSH : □
DSC－□□□    BM－□□            S : □. □/□□□
J－□□□□     J4－□□  G－□□□     M : □/□□    H－□. □□□
```

7.1.3 TEST MODE SCREEN DISPLAY

■ Display Specification of the Test Mode



① Address indication
The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)
[* * * * * * * *]
CD : A-TIME (min. sec.) [0 0 0 0 * * * *]

② Code indication of remote control unit [R – * * * *]
In case of double code, display a 2nd code.

③ Main unit keycode indication [K – * *]

④ Background color indication [C – R* * G* * B* *]

⑤ (1) Tracking status [TRKG – * * *]
Tracking on : [ON]
Tracking off : [OFF]
(2) Laser diode current value [LDI – * * *]

⑥ (1) Spindle status [SPDL – * * *]

Spindle accelerator and brake, free-runnimg	[A/B]
FG servo	[FG]
Rough, velocity phase servo	[SRV]
Offset addition, rough, velocity phase servo	[O_S]

(2) AFB status [AFB – * *]

ON	[ON]
OFF	[OFF]

⑦ Mechanism (loading) position value [M – * *]
Unknown : [01] or [41]
Open state : [04]
Close state : [08]
During opening : [12]
During closing : [22]

⑧ Slider position [S – * * * *]
CD TOC area : [IN]
CD active area : [CD]

⑨ Output video system [V – * * * *]
NTSC system : [NTSC]
PAL system : [PAL]
Automatic setting : [AUTO]
Scart terminal output [SK – * *]
(Display only the WY model which can do the output setting of scart terminal.)
VIDEO : [00]
S-VIDEO : [01]
RGB : [02]

⑩ (1) Disc sensing [DSC – * * *]
The type of discs loaded is displayed.
[DVD], [CD], [VCD], [ ]
(2) CD 1/3 beam switch [BM – * *]

⑪ Jitter value [J – * * * *]
Make the jitter four times, and renew it in every 0.5 second.
[J4 – * *]

⑫ Version of the AV-1 chip / version of firmware [AV: * * / * * * * * * * *]

⑬ Version of the FL controller [FL: * * * *]

⑭ Region setting of the player [REG: *]
Setting value : [1] to [6]

⑮ Destination setting of the FL controller [MDL: * * * * / * * *]
Four characters in the front represent the type of model.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RAM/RL/RD, LB: /LB, WY: /WY

⑯ Part number of the flash ROM and system controller
[* * * * * * / * * * * * *]

⑰ Version of the flash ROM [V: *. * * *]
Flash ROM size [FLSH = *]

⑱ Revision of the system controller [S: * . * / * * *]

⑲ (1) Revision of the DVD mechanism controller [M: * / * *]

(2) Part number of the GUI-ROM (OEM model) [GUI: * * *]

(3) HOST conversion [HOST: * * *]

㉑ AGC setting [AGC – * * * [*]]

AGC on : [AGC-ON]
AGC off : [AGC-OFF]
[1] : RFAGC on [0] : RFAGC off

㉒ FTS servo IC information

DSP coefficient indication [KS – [* * * *] * * * *]
Displays the address (four digits) of the specified coefficient and the setting value (four digits) with [TEST] and [9] keys.

㉓ Error rate indication

① C1 error value of CD [ER – C1 * * * *]
② C1 error value of DVD [ER – * * * * * * * *]

㉔ Internal operation mode of mechanism controller [MM – * * : * *]

Internal mechanism mode (2 digits) and internal mechanism step (2 digits) of the mechanism controller

7.1.4 SELF-DIAGNOSIS FUNCTION

When enter the service mode, self diagnosis mode operates with the "ESC"+"CHP/TIM" keys automatically.

① Mechanism Error History (past eight times of error is displayed)

Two columns of the beginning display the error status for mechanism controller.
(the details of error contents refer to "7.1.6 Error Display".)
Eight columns of the back display the count UP value (turned count up every 20msec) from the power-up.
Example) 32h ≒ 1 sec, BB8h ≒ 1 min, 2BF20h ≒ 1 hour
In addition, when there was error after power-up immediately (till initial setting is completed), turn the most significant bit to ON.

② Check Item Display of Self Diagnosis Function

a) AV1 Host Bus check (possible the check only during stop) (Read & Write process of an internal specific register)
AV_1 : OK
: — ⇒ not yet check
: HOST BUS NG ⇒ HOST bus NG

b) Bus check between AV1 SDRAM (possible the check only during stop) (Read & Write process to the SDRAM)
AV_2 : OK
: — ⇒ not yet check
: AV1-SDRAM BUS NG ⇒ Bus NG between AV1 and SDRAM

c) DMA transfer port check from F.E. to AV1 (during stop, possible the check only in DVD or NO DISC)
(writing from F.E to SDRAM and reading of SDRAM)
AV_3 : OK
: — ⇒ not yet check
: FE-AV1 DMA NG ⇒ Bus NG between F.E and SDRAM installed outside of AV1

d) Video encoder (ADV****) check (Read of the specific register)
VE : OK
: NG ADV, ⇒ ADV register reading NG
: NG > ADV, ⇒ ADV communication NG of FR to video encoder
: NG > PRO ⇒ Communication NG from EBY to progressive decoder

e) DSP check (Read of the specific register)
DSP : OK
: NG ⇒ DASP NG

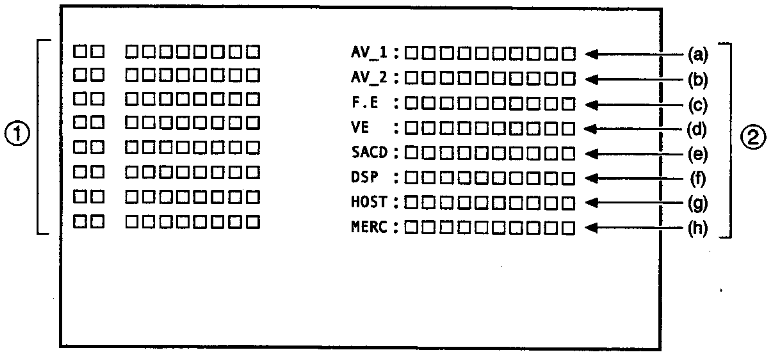
f) SACD check (Read of the specific register)
SACD : OK
: NG ⇒ SACD NG

g) 1394 relation HOST controller check
HOST : OK
: NG ⇒ HOST controller NG

h) 1394 relation Mercury CHIP check
MERC : OK
: NG ⇒ Mercury CHIP NG

Display the mechanism error history and self diagnosis result by pressing the "CHP / TIM" key once again.
Afterwards press the "CHP / TIM" key with toggle and change the display.

Display screen of mechanism error history and self diagnosis result



7.1.5 FUNCTION SPECIFICATION OF THE SERVICE MODE

• FL indication of EDC / ID error (short cut function)

Indicate it in FL with the "ESC"+"CX" keys (LD remote control unit).
Indication is released with the "ESC" key during display.

FL indication contents

00/00/01 *

- 01: Indicate number of the location that caused EDC and ID errors
- Middle 00: Retry number of times at having caused ID error (error is indicated only in the occurring moment)
  Retry number of times of the latest ID error in the ST system
- First 00: Retry number of times at having caused EDC error (error is indicated only in the occurring moment)
  Retry number of times of the latest EDC error in the ST system

* Mark: When even once causes AV1 error, lights.

• Screen display of the service mode

Indicate to the screen with the "ESC"+"CHP/TIM" keys.
Release the indication with the "ESC" key.
Indication contents

① ID Address

② DVD in playback: Error rate regular indication and exponent indication
CD/VCD in playback indicates the number of correct frame of C1 error /5 seconds.

③ Self diagnosis indication
Indicate the self diagnosis result whether the F.E is normal.

Self Check	: During FE checks
Self Check OK	: Abnormality is not found in F.E.
Self Check Error	: Abnormality is found in F.E.

Indicate the mechanism error history and self diagnosis result by pressing the "CHP / TIM" key once again.
Afterwards press the "CHP / TIM" key with toggle and change the display.
Indication of the mechanism error history and self diagnosis result refer to "7.1.4 self diagnosis function".

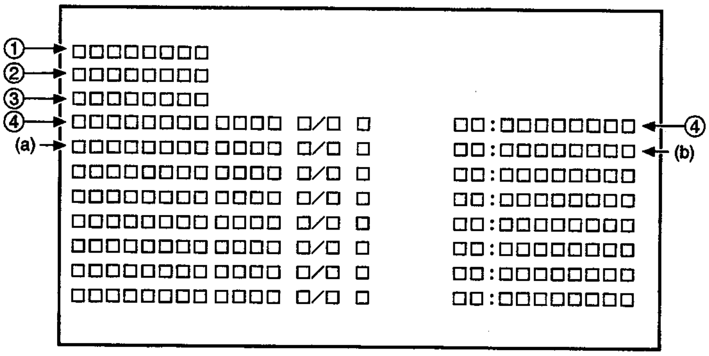
④ Error information indication of the AV decoder
(a)
When a retry occurred in reading from the disc, a history indicates the occurrence location and the occurrence reason.
History is indicated to past seven times.
Eight columns of the beginning show the physical address which occurred of retry.
As for four columns of next, bitmap indicates EDC status. LSB shows the first sector during a block and MSB shows a last sector.
Following field indicates the retry number of times.
One digit in front of " / " shows number of times of the retry by EDC Error which occurred in the same block in succession.
One digit after " / " shows number of times of the retry by ID Check Error which occurred in the same block in succession.
" * " of last one digit shows the EDC Check NG Count Over.
" # " shows the ID Check NG Count Over.
When " * " and " # " are not indicated, show that data were rightly readable by retry process.
(b)
Indicate the error information that detected with the Audio/Video Decoder. When error occurred, a history indicates the occurrence time and the occurrence reason. History is indicated to past seven times.
Field in front of ":" indicates the error information of Audio/Video Decoder.
(Indication information is different from Fujitsu Decoder with Mitsubishi Decoder)
02 model is 656 series and 757 series is Mitsubishi model.

- Specification for the Audio/Video Decoder (M65773FP) model of Mitsubishi
  - bit7: VLD Fatal Error detection
  - bit6: VLD Not Fatal Error detection
  - bit5: Number of Macro Block mismatch
  - bit4: Decode error
  - bit3: VLD Sequence Layer Fatal Error detection
  - bit2: VLD Picture Layer Fatal Error detection
  - bit1: VLD Slice Layer Fatal Error detection
  - bit0: Start-up Sequence Time-out Error detection

Following field in " : " indicates a value of STC (System Time Clock) which detected the above Audio/Video Decoder error.

* When often perform the switch of debug screen, an error history will be increased.
As for this, CPU power is used for update of OSD drawing, symptoms occur so that control of VBR Buffer is not in time.

Indication contents



7.1.6 ERROR DISPLAY

Error codes that are displayed on the FL display without using the remote control unit

FL Display	Possible causes	Operation of the unit
AV1 VER	AV-1 chip is not a match with the program of system controller	The sound may not out with the specific audio.
CPU AERR	CPU address error (Hardware is unusual.)	No operation
DMA AERR	DMA address error (Hardware is unusual.)	No operation
FLASH ID	Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation	No operation
FLASH WRP	Write protect error of the flash ROM	No operation
FLASH SIG	Difference in part number of the flash ROM (When the ROM which could't be used was used.)	No operation
FLASH SUM	Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation (Hardware is unusual.)	No operation
FLASH SIZ	Size error of the flash ROM (Use 4 or 8 M-bit.)	No operation
GUI ROM ERROR	Difference in version of GUI ROM and system controller software.	Operate as the OSD model
ILLGAL	The system controller fetched a code other than an operation code (Hardware is unusual.)	No operation
MECHA CPU	Difference in version of the internal ROM of the mechanism controller and of the flash ROM.	No operation
RESERVE	Undefined interrupt (Hardware is unusual.)	No operation
SLOT	Inappropriate slot command issued (Hardware is unusual.)	No operation

Error codes that are displayed on the FL display by using the remote control unit (Mechanism controller error)

To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of center of the FL display
To display the error history: ESC + DISPLAY + One shot; Location of the display: TV screen

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
11	Search timeout	Search could not be complete within 7 seconds.	Search could not be complete within 7 seconds, and it could not enter the target area within 7 seconds by VCD scan.	CD : Stops, DVD: Continues operation
12	Search retry error	More beyond the target while the read-in search was converging. A search could not be completed after 3 retries while the unit was tracing 11 tracks. A search could not be completed after retry when timeout occurs at read-in.		CD: Stops, DVD: Continues operation
19	Tracing timeout while converging	Timeout (10.5 seconds) while tracing at the stage of convergence of a search.		Stop
1B	Index 0 search error		During Track (Index) Search, the search for the beginning of a program could not be completed within 3 seconds (20 seconds in the case of Index Search) after positioning based on the TOC data was completed.	Stop
1C	Embossment plunge error (only a model corresponding to RW)	Plunged into unreadable embossment of DVD-RW player.		1. In wobble nothing (error distinction) : search to address 2E400h 2. In wobble existence: Tray open
22	Timeout of slider inner circumference	Inside switch could not ON within 3 seconds.		Stop
23	Timeout of slider outer circumference	Inside switch could not OFF within the following times: at ATB: 2 seconds, at Backup: 2 or 2.02 seconds.		Stop
33	No FOK pulse during playback	When the focus was deviated continuously 20 times.		Adjusts focus at the innermost circumference and tries to return to its position where the error was generated (for 3 times),then opens. If the same error persists after one retry, the tray opens. (No FOK pulse)
38	Disc-type-sensing error	Were not able to playback from the disc distinction process. PLAY or STOP was not completed by backup operation of the disc distinction. Distinguished it from the blank disc in the ATB process completion.		Open

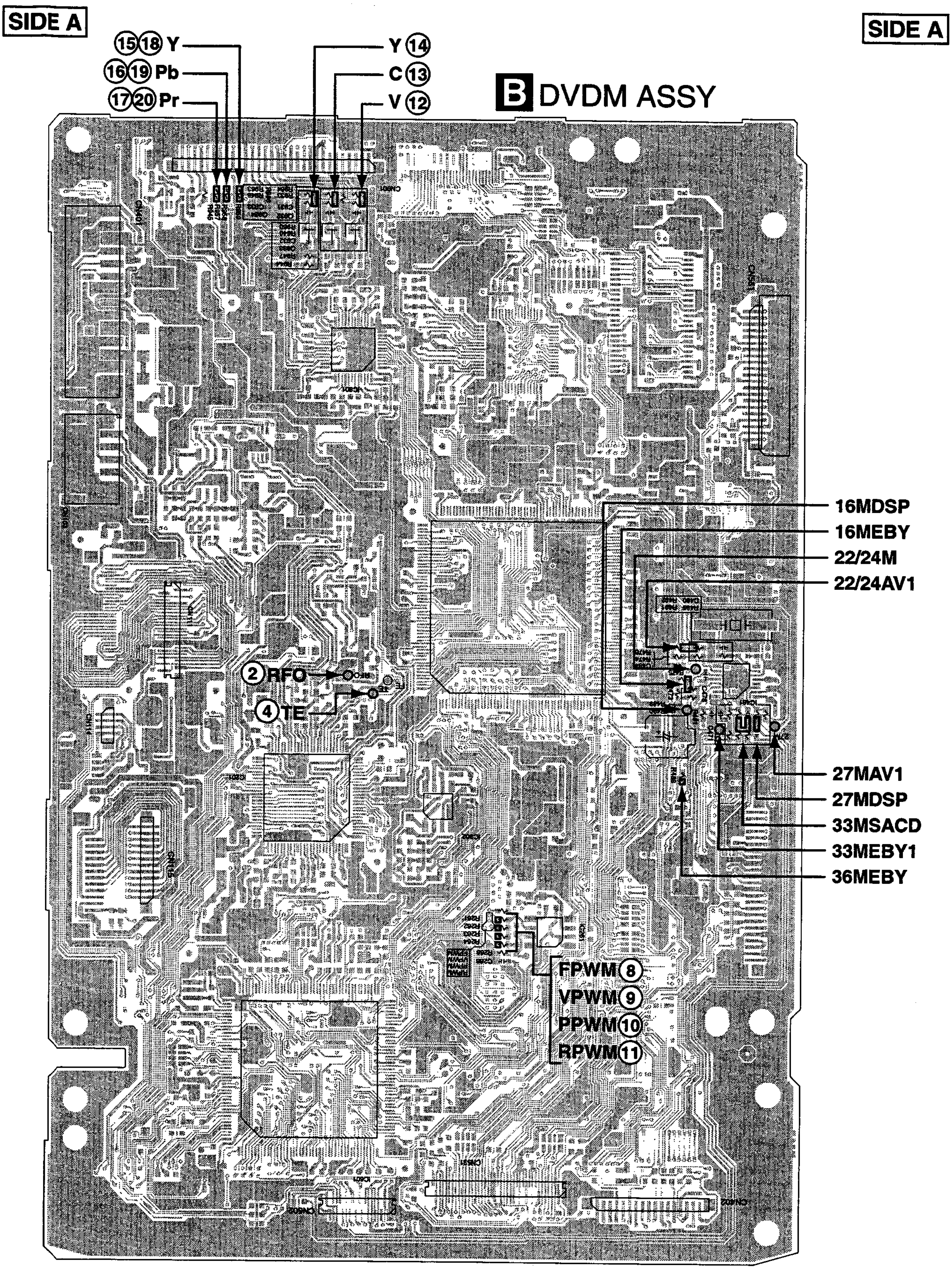
FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
39	SGC converge timeout	SGC could not converge during detects the peak		Open
41	Spindle timeout	The unit did not enter Stop mode within 10 seconds of issuance of a Stop command. Disc distinction is not completed even if passes for 10 seconds after the spindle turned.		Stop
48	Spindle FG transition timeout	Did not reach to the rotating speed that ATB was possible for less than 10 seconds. Did not reach aim CAV lock speed (high: 10%, low: 50%) for less than 10 seconds. CAV process passed more than 5 seconds or abnormal speed was detected. Spindle does not lock for less than 3 seconds in the BCA read start or end.		Stops. (FG timeout)
49	Spindle PLL transition timeout	CAV process passed more than 5 seconds. Abnormal speed was detected.		Stops. ("73" is displayed during starting process.)
4A	Spindle lock timeout	Spindle could not lock more than 1.5 seconds before start the AFB.		Stops. ("73" is displayed during starting process.)
51	Auto sequence timeout of peak detection	ABUSY did not return within 1 second after the DDTCT (peak detection) command was sent.		Stop
52	Auto sequence timeout of focus jump down	ABUSY did not return within 30 mS after the FJMPD (Focus jump 1 to 0) command was sent.		Open
53	Auto sequence timeout of focus jump up	ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent.		Open
54	Auto sequence timeout of play AGC	ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent.		Stop
55	Auto sequence timeout of disc-type-sensing	ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent.		Stop
56	Auto sequence timeout of ATB2	ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent.		Stop
57	Auto sequence timeout of tracking servo ON	ABUSY did not return within 0.5 sec. after the TSON (tracking servo ON) command was sent.		Stop
58	Auto sequence timeout of ATB1	ABUSY did not return within 0.2 sec. after the TBL (external ATB) command was sent.		Stop
59	Auto sequence timeout of focus gain adjustment	ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent.		Stop
5A	Auto sequence timeout of tracking gain adjustment	ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent.		Stop
5B	Auto sequence timeout of offset adjustment	ABUSY did not return within 1 second after the AVE (offset adjustment) command was sent.		Stop
5C	Auto sequence timeout of modulation factor measurement	ABUSY did not return within 200 mS after the ADJMIR (modulation factor measurement) command was sent.		Stop
5D	Auto sequence timeout of auto focus bias	ABUSY did not return within 2 seconds after the AFB (auto focus bias) command was sent.		Stop
5F	Auto sequence already busy	A command could not be sent because ABUSY was low. ABUSY did not return within 200 mS after TLV command was sent.		Stop
62	Pause retry error	Pause mode could not be restored within three retries after it had been released.		Continues operation
71	ID reading check during playback	An ID could not be read for 1 second or more.		Stop
72	Subcode check failure during playback		No frame could be read for 3 seconds or more.	Stop
73	ID can not read during startup	An ID could not be read within 1 second after the AFB tracking on.		Opens (ID readout failure)

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
74	Subcode check failure during startup		Subcode could not be read within 1 second after the tracking on.	Opens (Subcode readout failure).
A1	Communication timeout of DSP command	A command could not be issued to DSP because Command Busy (XCBUSY) was in force (XCBUSY = L) for a specified time (about 200 μS).		Open
A2	Communication timeout for reading DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 200 μS) before and after a coefficient read command was issued to DSP, or the address echo-back after command issuance did not match the setup address.		Open
A4	Communication timeout for continuously writing DSP coefficient	Command Busy (XCBUSY) was in force for 200 μS during continuous coefficient writing, or before and after a continuous write command was issued to DSP.		Open
B1	Timeout error for backup	In the backup sequence, codes could not be read for fixed time.		Stops
B2	Retry error for backup	Cannot close tracking even if performs backup fixed number of times.		Stops
B3	Retry error for trace	During tracing, do not restore after the runaway detection backup was performed several times.		Stops
C3	Detection of tracking overcurrent	During playback, the overcurrent detection port was at L for 300 ms or more continuously.		Stops (the mechanical controller operates independently).
(C5)	Short-circuit test corresponding error	After the overcurrent detection (C3 error), furthermore the overcurrent detection port was at L for 300 mS or more continuously.		Turns off the power instantly (No indication on the FL display and no writing to flash memory)
F5	Tray being pushed	The tray switch that had been Open mode was forcibly changed to a mode other than Open by an external force.		Closes
F6	Code reading NG		(PH code nothing) When Philips code is not readable during LD starting, and a code was not readable after the slider moved to FWD and REV directions slowly each for five seconds. (PRD) In the CD starting, when a subcode of TOC part was not readable, but the subcode of the program area was readable.	Search, scan and special playback prohibition, Playback as playback CD-R (PRD mode) as it is.
F8	Loading timeout	Loading or unloading could not be completed within a specified time (about 10 seconds). Though a portable cover is opening, when a close command was issued from the system controller.		Reverses the loading direction. It timeout is repeated upon retry, the unit stops.
FC	Focus	• Focus ON sequence could not be completed more than two seconds. • Auto sequence command was finished, actually focus ON was not completed. • Focus did not enter even if retried it eight times.		Stops wherever possible then opens (stops in the case of side B).

Error codes that are displayed on the FL display by using the remote control unit (Device error)
To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of left of the FL display

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
bit4=1 10 etc.	Mechanism controller RAM check sum error			No operation or it becomes debugging indication if the power is able to ON.
bit3=1 08 etc.	AV1 access error (read, write NG)			
bit2=1 04 etc.	LSI11 access error			
bit0=1 01 etc.	SRAM access error			

7.1.7 TEST POINTS LOCATION & WAVEFORMS


SIDE A
SIDE A
A
B
C
D
E
F
⑮⑱ Y
⑯⑲ Pb
⑰⑳ Pr
Y ⑭
C ⑬
V ⑫
B DVDM ASSY
② RFO
④ TE
16MDSP
16MEBY
22/24M
22/24AV1
27MAV1
27MDSP
33MSACD
33MEBY1
36MEBY
FPWM ⑧
VPWM ⑨
PPWM ⑩
RPWM ⑪

WAVEFORMS

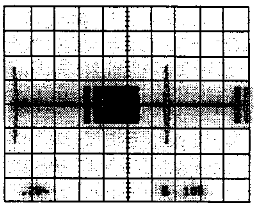
Note : The encircled numbers denote measuring point in the schematic diagram.

B DVDM ASSY

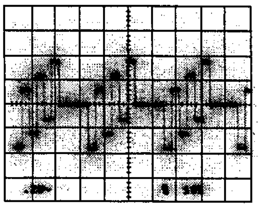
Measurement condition : No. 2, 4 and 8 to 11 : MJK1, Title 1-chp 1

No. 12 to 14 : DVD-REF-A1, T2-Chap.1
No. 15 to 20 : DVD-REF-A1, T2-Chap.19

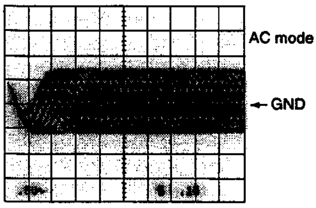
⑬ **Foot of R963 (C)**
V: 0.2V/div. H: 10μsec/div.



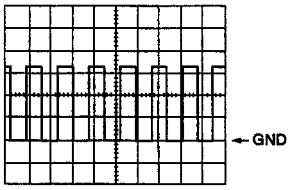
⑲ **Foot of R958 (Pb)**
V: 0.2V/div. H: 10μsec/div.



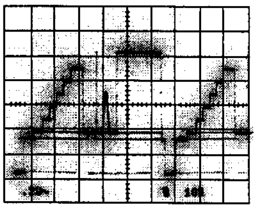
② **Q106-emitter (RFO)**
V: 500mV/div. H: 0.1μsec/div.



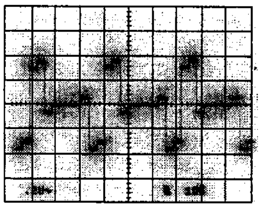
⑧ **Foot of R261 (FPWM)**
V: 1V/div. H: 10μsec/div.



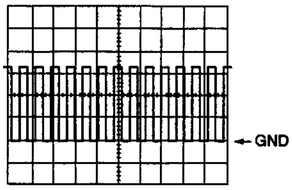
⑭ **Foot of R960 (Y)**
V: 0.2V/div. H: 10μsec/div.



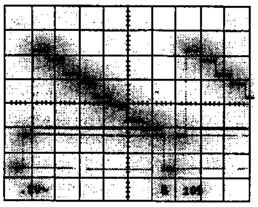
⑳ **Foot of R957 (Pr)**
V: 0.2V/div. H: 10μsec/div.



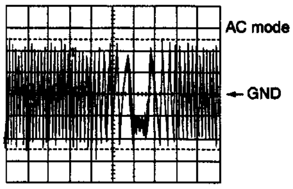
⑨ **Foot of R262 (VPWM)**
V: 1V/div. H: 10μsec/div.



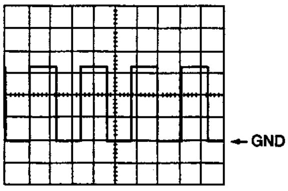
⑮ **Foot of R959 (Y)**
V: 0.2V/div. H: 10μsec/div.



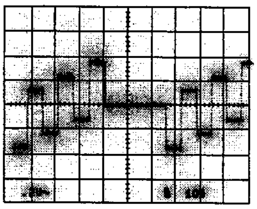
④ **IC101-pin 42 (Tracking Error)**
(Al-Inner Tracking Off)
V: 500mV/div. H: 2msec/div.



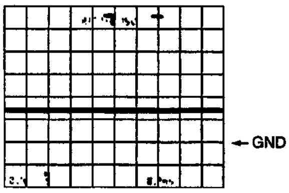
⑩ **Foot of R263 (PPWM)**
V: 1V/div. H: 0.2msec/div.



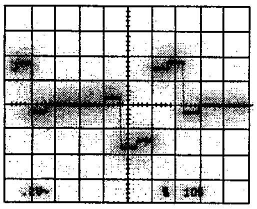
⑯ **Foot of R958 (Pb)**
V: 0.2V/div. H: 10μsec/div.



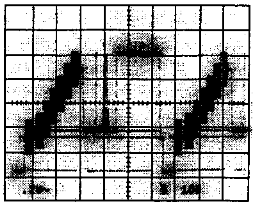
⑪ **Foot of R264 (RPWM)**
V: 1V/div. H: 5msec/div.



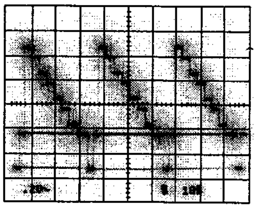
⑰ **Foot of R957 (Pr)**
V: 0.2V/div. H: 10μsec/div.



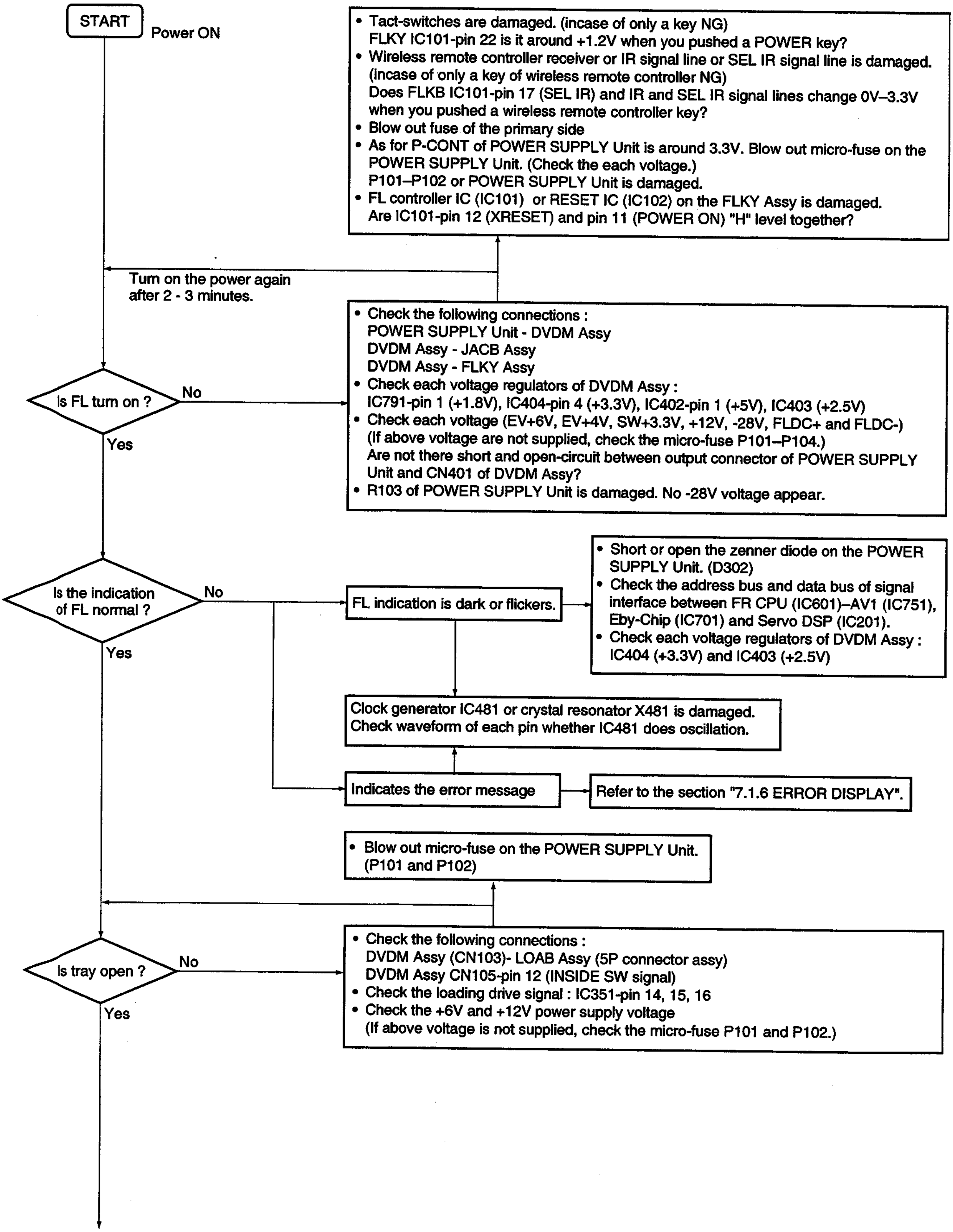
⑫ **Foot of R964 (V)**
V: 0.2V/div. H: 10μsec/div.



⑱ **Foot of R959 (Y)**
V: 0.2V/div. H: 10μsec/div.



7.1.8 TROUBLE SHOOTING


START
Power ON
Turn on the power again after 2 - 3 minutes.
Is FL turn on ?
No
Yes
Is the indication of FL normal ?
No
Yes
FL indication is dark or flickers.
Indicates the error message
Is tray open ?
No
Yes

- Tact-switches are damaged. (incase of only a key NG)
  FLKY IC101-pin 22 is it around +1.2V when you pushed a POWER key?
- Wireless remote controller receiver or IR signal line or SEL IR signal line is damaged. (incase of only a key of wireless remote controller NG)
  Does FLKB IC101-pin 17 (SEL IR) and IR and SEL IR signal lines change 0V–3.3V when you pushed a wireless remote controller key?
- Blow out fuse of the primary side
- As for P-CONT of POWER SUPPLY Unit is around 3.3V. Blow out micro-fuse on the POWER SUPPLY Unit. (Check the each voltage.)
  P101–P102 or POWER SUPPLY Unit is damaged.
- FL controller IC (IC101) or RESET IC (IC102) on the FLKY Assy is damaged.
  Are IC101-pin 12 (XRESET) and pin 11 (POWER ON) "H" level together?

- Check the following connections :
  POWER SUPPLY Unit - DVDM Assy
  DVDM Assy - JACB Assy
  DVDM Assy - FLKY Assy
- Check each voltage regulators of DVDM Assy :
  IC791-pin 1 (+1.8V), IC404-pin 4 (+3.3V), IC402-pin 1 (+5V), IC403 (+2.5V)
- Check each voltage (EV+6V, EV+4V, SW+3.3V, +12V, -28V, FLDC+ and FLDC-)
  (If above voltage are not supplied, check the micro-fuse P101–P104.)
  Are not there short and open-circuit between output connector of POWER SUPPLY Unit and CN401 of DVDM Assy?
- R103 of POWER SUPPLY Unit is damaged. No -28V voltage appear.

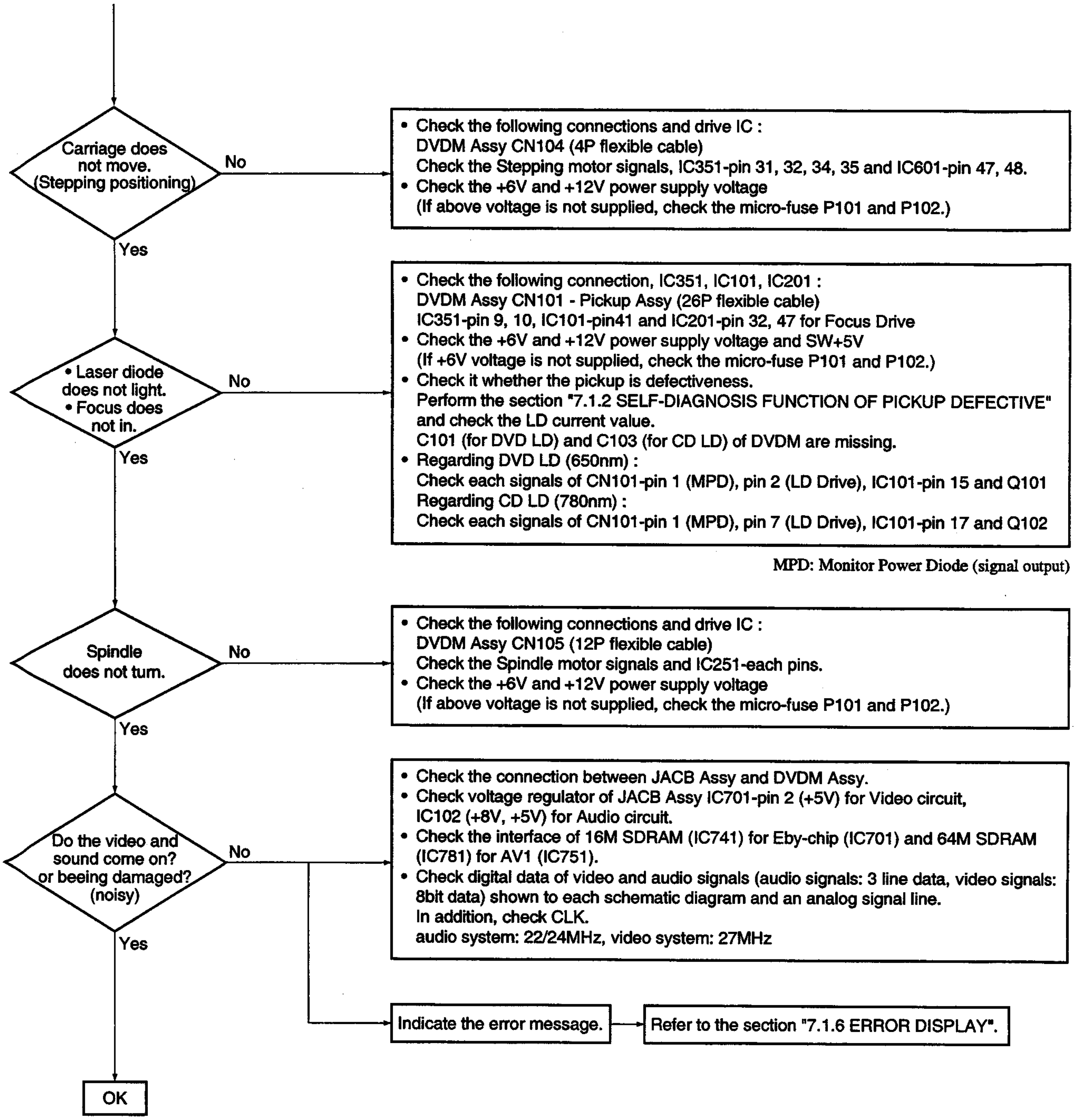
- Short or open the zenner diode on the POWER SUPPLY Unit. (D302)
- Check the address bus and data bus of signal interface between FR CPU (IC601)–AV1 (IC751), Eby-Chip (IC701) and Servo DSP (IC201).
- Check each voltage regulators of DVDM Assy :
  IC404 (+3.3V) and IC403 (+2.5V)

Clock generator IC481 or crystal resonator X481 is damaged.
Check waveform of each pin whether IC481 does oscillation.

Refer to the section "7.1.6 ERROR DISPLAY".

- Blow out micro-fuse on the POWER SUPPLY Unit. (P101 and P102)

- Check the following connections :
  DVDM Assy (CN103)- LOAB Assy (5P connector assy)
  DVDM Assy CN105-pin 12 (INSIDE SW signal)
- Check the loading drive signal : IC351-pin 14, 15, 16
- Check the +6V and +12V power supply voltage
  (If above voltage is not supplied, check the micro-fuse P101 and P102.)


Carriage does not move. (Stepping positioning)
No
Yes
• Laser diode does not light. • Focus does not in.
No
Yes
Spindle does not turn.
No
Yes
Do the video and sound come on? or beeing damaged? (noisy)
No
Yes
OK

- Check the following connections and drive IC :
  DVDM Assy CN104 (4P flexible cable)
  Check the Stepping motor signals, IC351-pin 31, 32, 34, 35 and IC601-pin 47, 48.
- Check the +6V and +12V power supply voltage
  (If above voltage is not supplied, check the micro-fuse P101 and P102.)

- Check the following connection, IC351, IC101, IC201 :
  DVDM Assy CN101 - Pickup Assy (26P flexible cable)
  IC351-pin 9, 10, IC101-pin41 and IC201-pin 32, 47 for Focus Drive
- Check the +6V and +12V power supply voltage and SW+5V
  (If +6V voltage is not supplied, check the micro-fuse P101 and P102.)
- Check it whether the pickup is defectiveness.
  Perform the section "7.1.2 SELF-DIAGNOSIS FUNCTION OF PICKUP DEFECTIVE" and check the LD current value.
  C101 (for DVD LD) and C103 (for CD LD) of DVDM are missing.
- Regarding DVD LD (650nm) :
  Check each signals of CN101-pin 1 (MPD), pin 2 (LD Drive), IC101-pin 15 and Q101
  Regarding CD LD (780nm) :
  Check each signals of CN101-pin 1 (MPD), pin 7 (LD Drive), IC101-pin 17 and Q102

MPD: Monitor Power Diode (signal output)

- Check the following connections and drive IC :
  DVDM Assy CN105 (12P flexible cable)
  Check the Spindle motor signals and IC251-each pins.
- Check the +6V and +12V power supply voltage
  (If above voltage is not supplied, check the micro-fuse P101 and P102.)

- Check the connection between JACB Assy and DVDM Assy.
- Check voltage regulator of JACB Assy IC701-pin 2 (+5V) for Video circuit, IC102 (+8V, +5V) for Audio circuit.
- Check the interface of 16M SDRAM (IC741) for Eby-chip (IC701) and 64M SDRAM (IC781) for AV1 (IC751).
- Check digital data of video and audio signals (audio signals: 3 line data, video signals: 8bit data) shown to each schematic diagram and an analog signal line.
  In addition, check CLK.
  audio system: 22/24MHz, video system: 27MHz

Indicate the error message. → Refer to the section "7.1.6 ERROR DISPLAY".

7.1.9 DISASSEMBLY

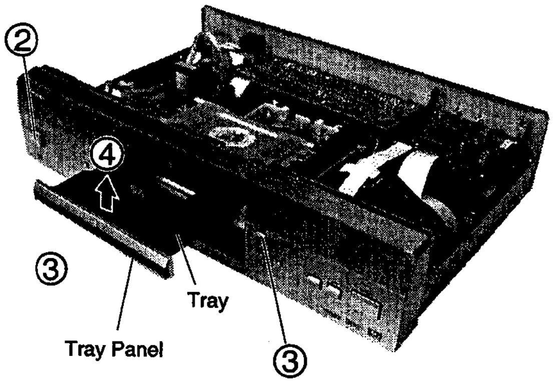
■ DIAGNOSIS OF PCBs

Note :

When diagnosing the unit, be sure to use two Extension cables for service (Part No. : GGF1157, GGD1298) and a Extension Board for service (Part No. : GGF1430).

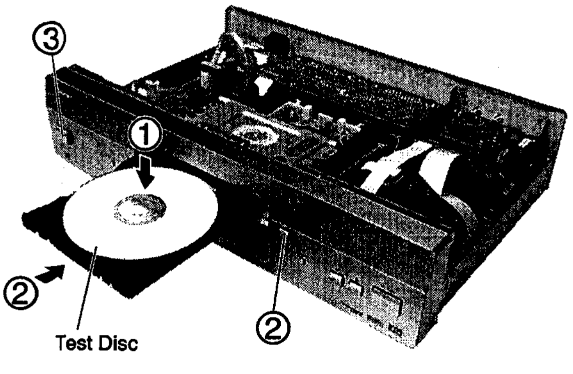
1 Bonnet and Tray Panel

① Remove the Bonnet (Screws × 5).
② Turn power ON.
③ Open the Tray (▲).
④ Remove the Tray Panel.


②
④
③
Tray
Tray Panel
③

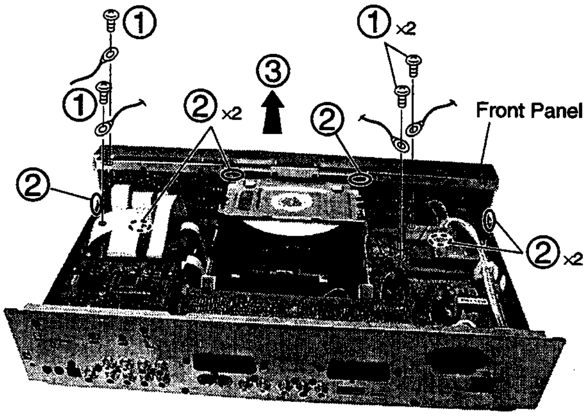
2 Test Disc Set

① Set the Test Disc.
② Close the Tray (▲). → Clamp the Test Disc.
③ Turn power OFF.
④ Pull out the Power Cord from the outlet.


③
①
②
Test Disc
②

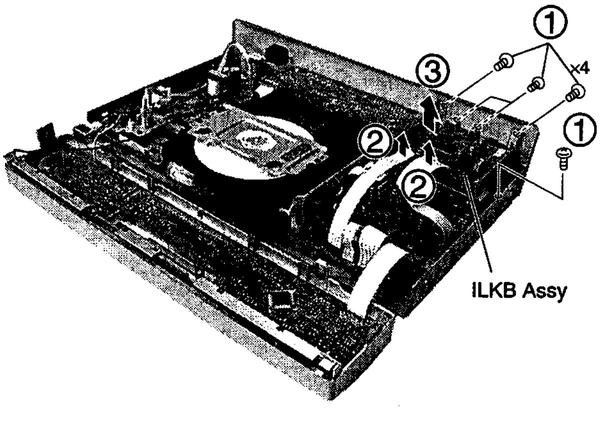
3 Front Panel

① Remove three Earth Lead Units (Screws × 3).
② Unhook (× 6).
③ Remove the Front Panel.


①
①×2
①
③
②×2
②
Front Panel
②
②×2

4 ILKB Assy

① Remove five screws.
② Release two Flexible Cables.
③ Remove the ILKB Assy.

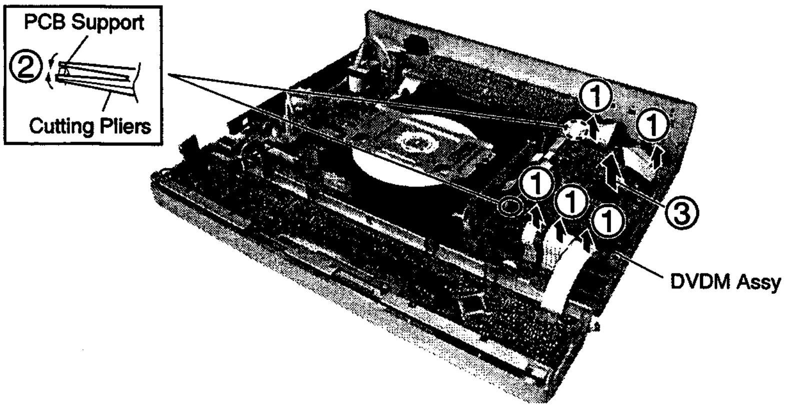

①
③
×4
①
②
②
ILKB Assy

5 DVDM Assy

① Release five Flexible Cables.

② Release from two PCB Supports.

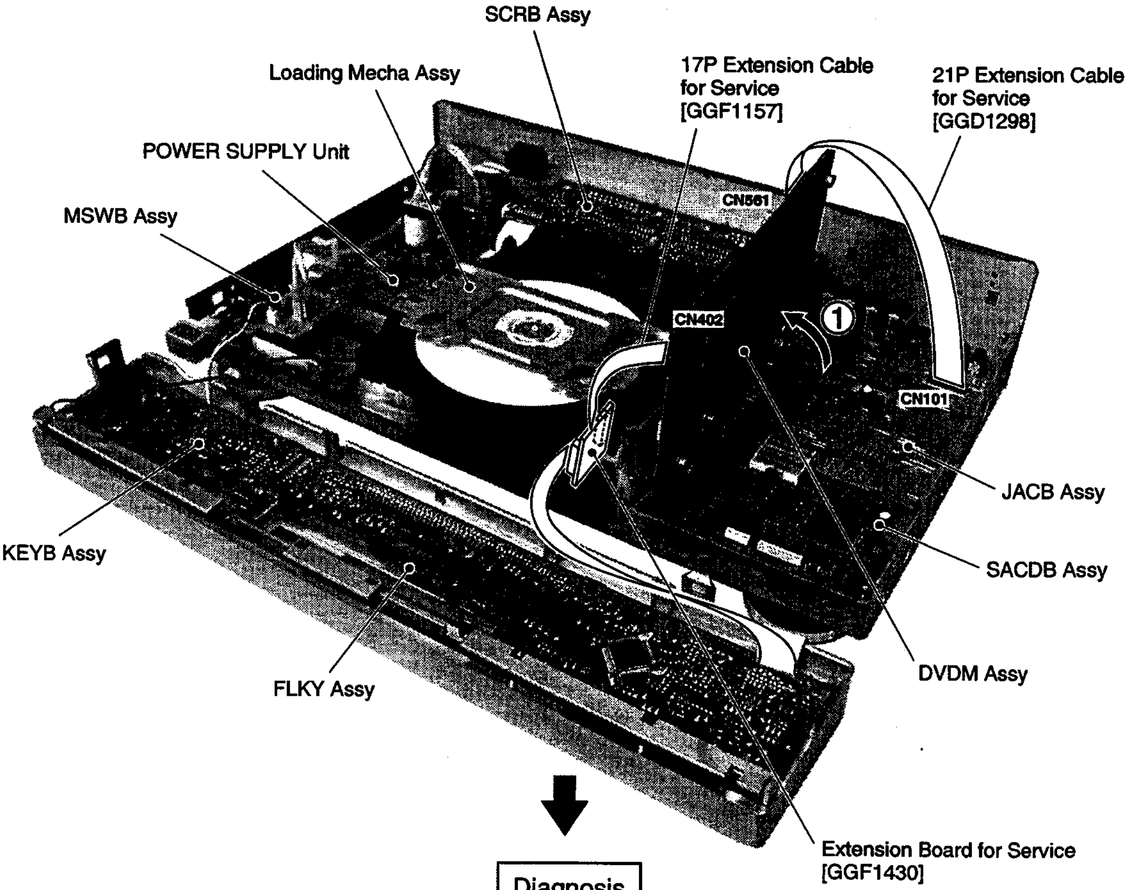
③ Remove the DVDM Assy.


PCB Support
②
Cutting Pliers
①
①
①
①
①
③
DVDM Assy

6 Diagnosis

① Stand the DVDM Assy as figure below.

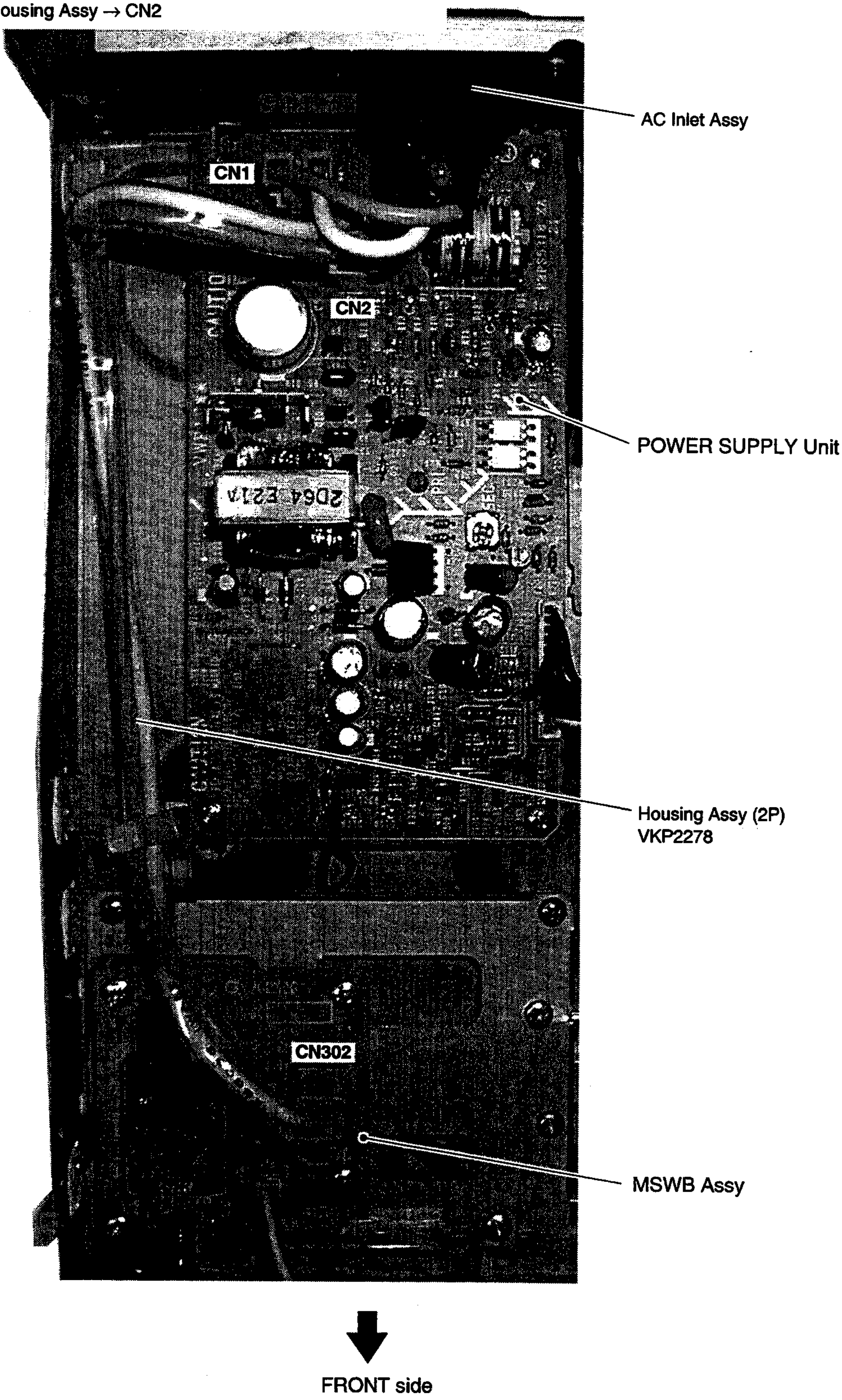
② Connect two Extension Cables for Service and a Extension Board for Service as figure below.


SCRB Assy
Loading Mecha Assy
17P Extension Cable for Service [GGF1157]
21P Extension Cable for Service [GGD1298]
POWER SUPPLY Unit
MSWB Assy
CN581
CN402
①
CN101
JACB Assy
KEYB Assy
SACDB Assy
FLKY Assy
DVDM Assy
Extension Board for Service [GGF1430]

Diagnosis

Connection Diagram of Housing Assy

At the time of re-assembly, connect each wire rod justly.
AC Inlet Assy → CN1
Housing Assy → CN2


CN1
CN2
CN302
AC Inlet Assy
POWER SUPPLY Unit
Housing Assy (2P)
VKP2278
MSWB Assy
FRONT side

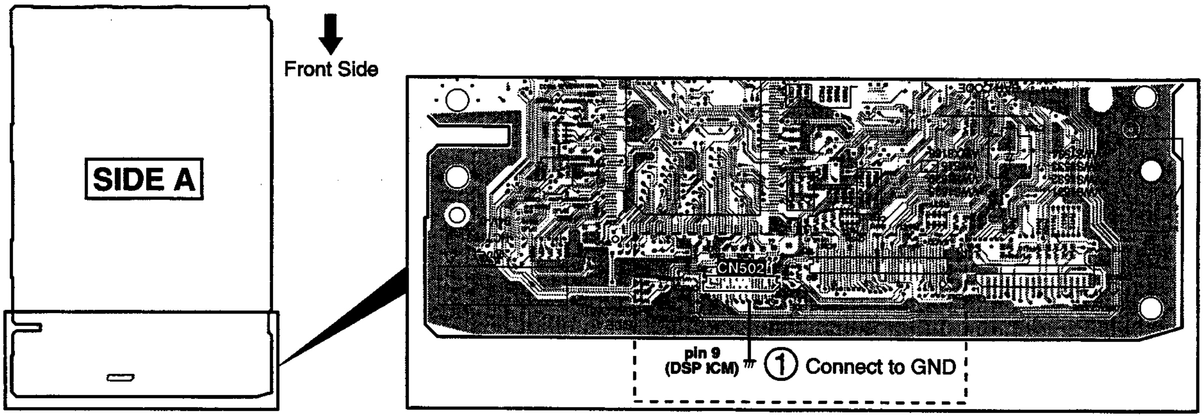
☞Diagnosis Method of Audio Block

• How to diagnose each audio signal of DVDM Assy without installing the SACDB Assy

[Do not connectes between CN502 ↔ CN801 , CN531 ↔ CN901 of FFCs.]
(DVDM) (SACDB) (DVDM) (SACDB)

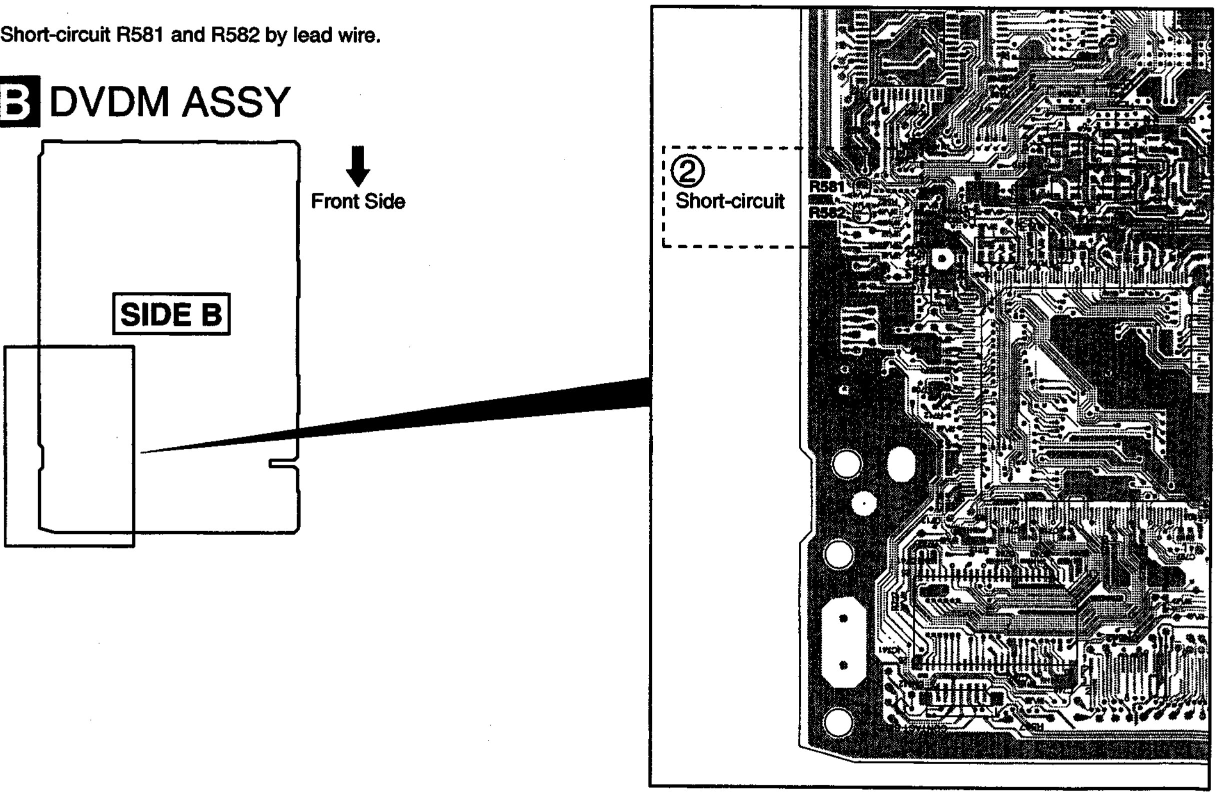
① Connect pin 9 of CN502 (DSP ICM) on the DVDM Assy to GND.

B DVDM ASSY


Front Side
SIDE A
CN502
pin 9
(DSP ICM)
① Connect to GND

② Short-circuit R581 and R582 by lead wire.

B DVDM ASSY


Front Side
SIDE B
② Short-circuit
R581
R582

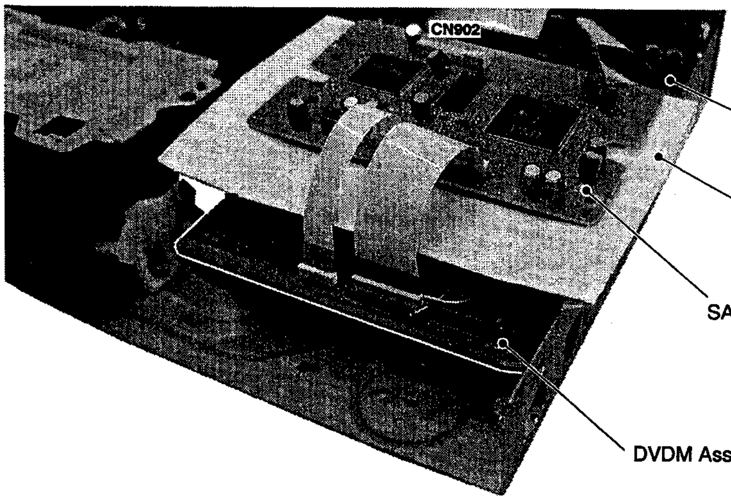
③ To confirm the Front L/R ch,
set "**Audio Output Mode**" of "**Speakers**" in "**The Initial Settings Menu**" to "**2 channel**", and playback the disc.

④ To confirm the Surround Ls/Rs ch and Center/Subwoofer ch,
turn the above setting into "**5.1 channel**", and playback the disc (Ls/Rs and Center/Subwoofer signals are recorded).

• How to diagnose the SACD and DSP blocks of the SACDB Assy

① Remove a Board to Board connector CN102 ↔ CN902 .
(JACB) (SACDB)

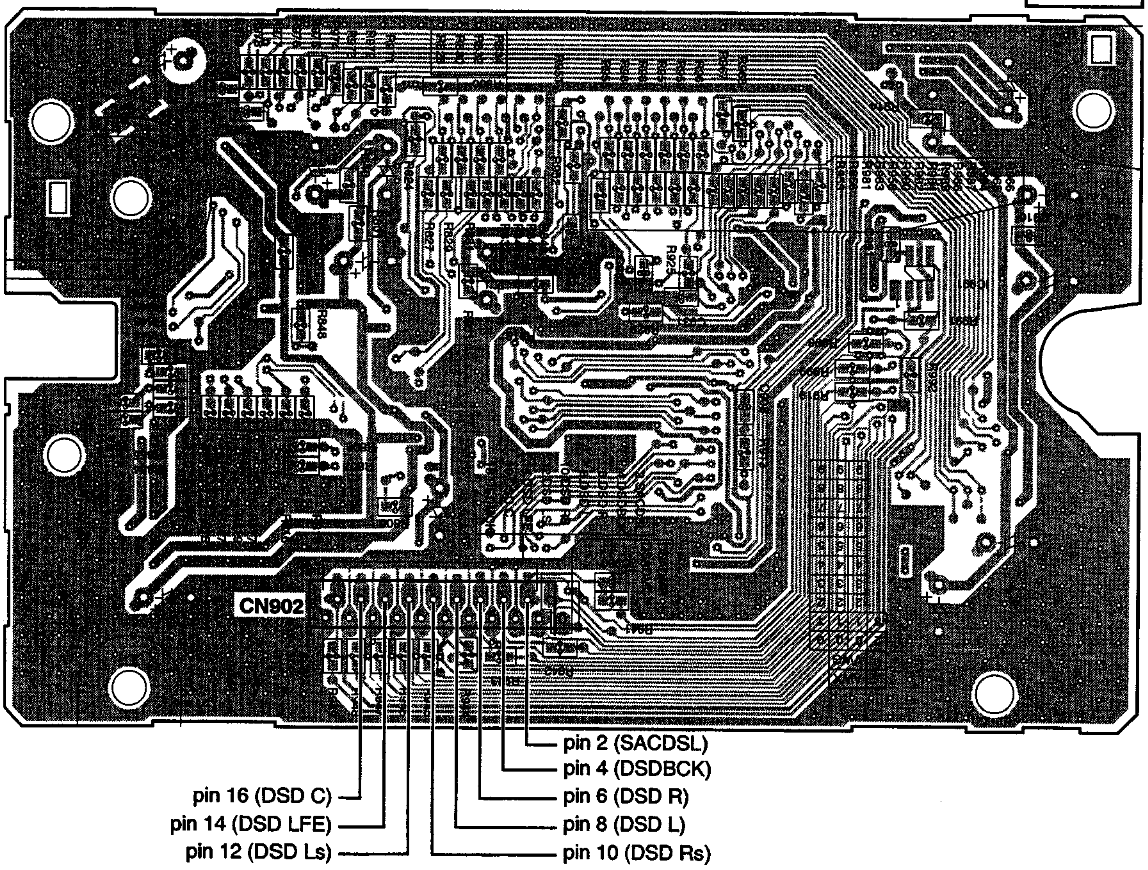
② styling like figure below.


CN902
JACB Assy
Insulation Sheet
SACDB Assy
DVDM Assy

③ In this case an audio of SACD is not output from the Audio jack.
However, observe the signal waveform of CN902 on the SACDB Assy, and can confirm it.
CN902 - pin 2 (SACDSL), pin 4 (DSDBCK), pin 6 (DSD R), pin 8 (DSD L),
pin 10 (DSD Rs), pin 12 (DSD Ls), pin 14 (DSD LFE), pin 16 (DSD C).

D SACDB ASSY

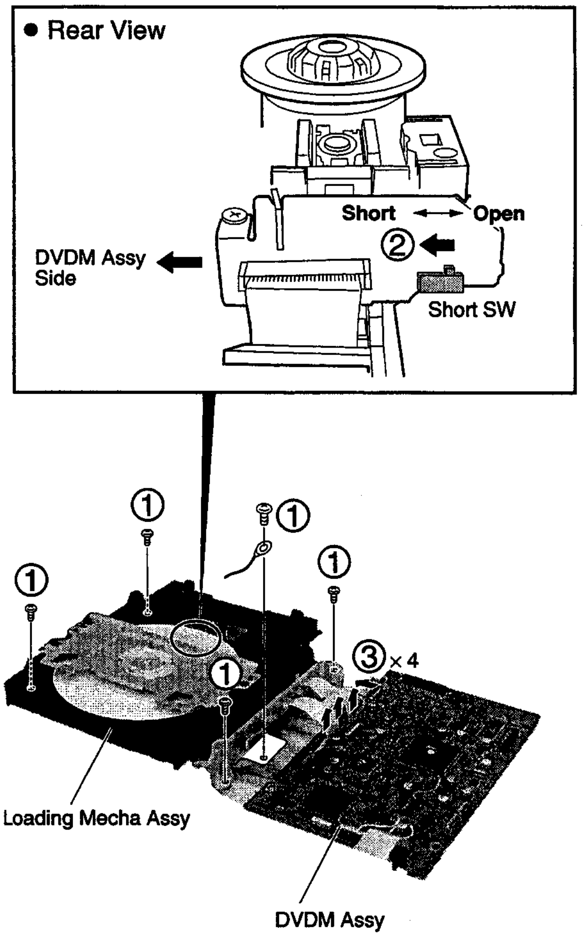
SIDE B


CN902
pin 2 (SACDSL)
pin 4 (DSDBCK)
pin 6 (DSD R)
pin 8 (DSD L)
pin 10 (DSD Rs)
pin 16 (DSD C)
pin 14 (DSD LFE)
pin 12 (DSD Ls)

Disassembly of the Traverse Mechanism Assy and the Pickup Assy

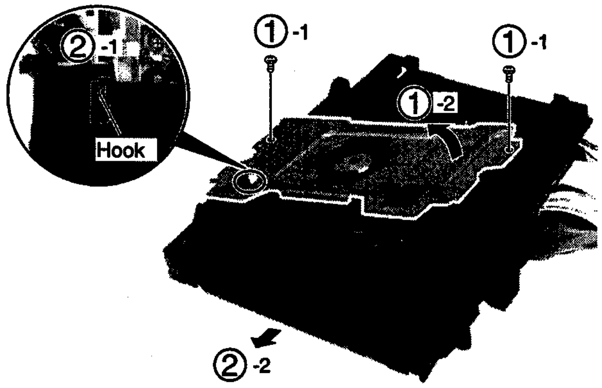
1 Loading Mecha Assy

① Remove five Screws.
② Turn the Short SW to short side.
③ Remove three Flexible Cables and a Connector.


● Rear View
Short
Open
②
DVDM Assy Side
Short SW
①
①
①
①
①
③×4
Loading Mecha Assy
DVDM Assy

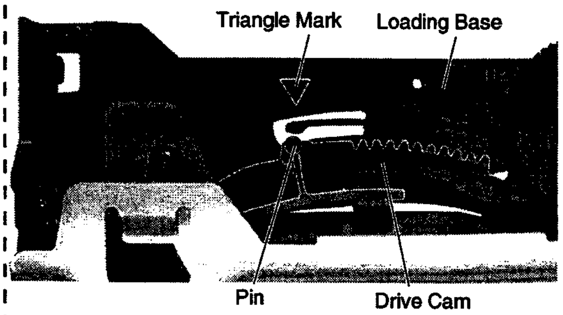
2 Tray

① Remove the Bridge (Screw ×2).
② Pull out the Tray and remove it while unhooking a hook.


②-1
Hook
①-1
①-1
①-2
②-2

☞Caution in the Tray Insertion

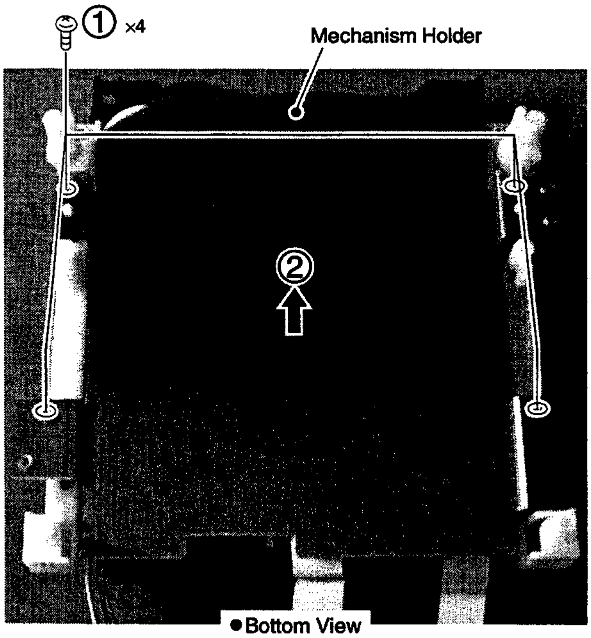
In the Tray insertion, insert it after matching a triangle mark of the Loading Base and a position of pin of the Drive Cam.


Triangle Mark
Loading Base
Pin
Drive Cam

3 Traverse Mechanism Assy-S and Pickup Assy-S

① Remove four screws.

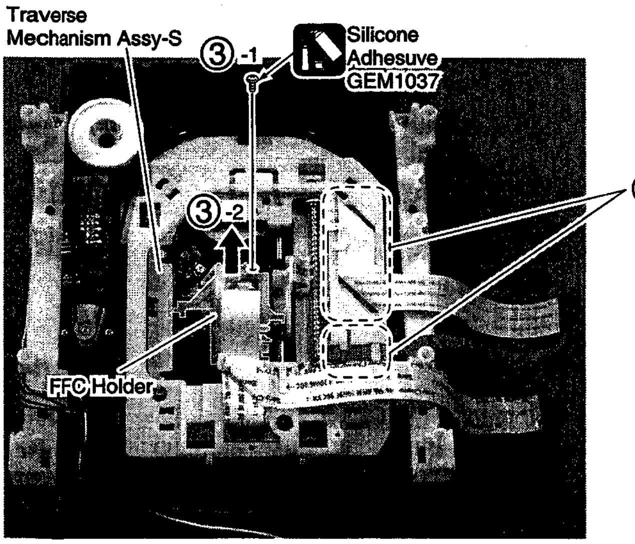
② Remove the Mechanism Holder.


① ×4
Mechanism Holder
②

● Bottom View

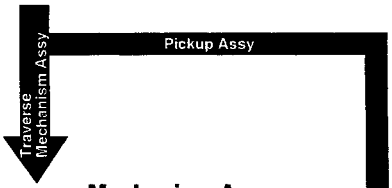
③ Remove the FFC Holder with the state which Flexible Cable was atatched. (Screw × 1)

Cautions :
Screw is locked with Silicone Adhesive.
Please lock it with Silicone Adhesive when installs it.


Traverse
Mechanism Assy-S
③-1
Silicone
Adhesuve
GEM1037
③-2
FFC Holder

● Bottom View

④ **When Removing The Traverse Mechanism Assy :**
Unclamp the Flexible Cable. (×2)

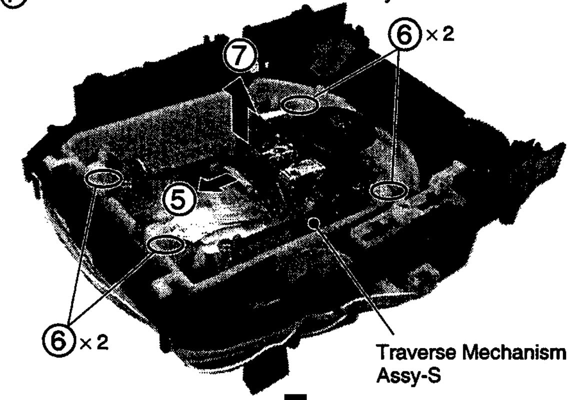

Pickup Assy
Traverse Mechanism Assy

● When Removing The Traverse Mechanism Assy

⑤ Remove the Pickup Flexible Cable

⑥ Unhook (×4)

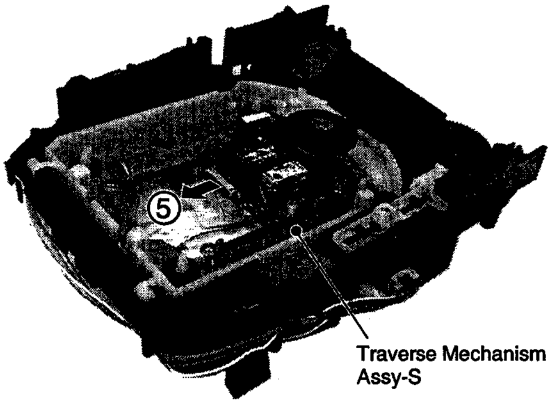
⑦ Remove the Traverse Mechanism Assy-S


⑦
⑥×2
⑤
⑥×2
Traverse Mechanism Assy-S

Exchange

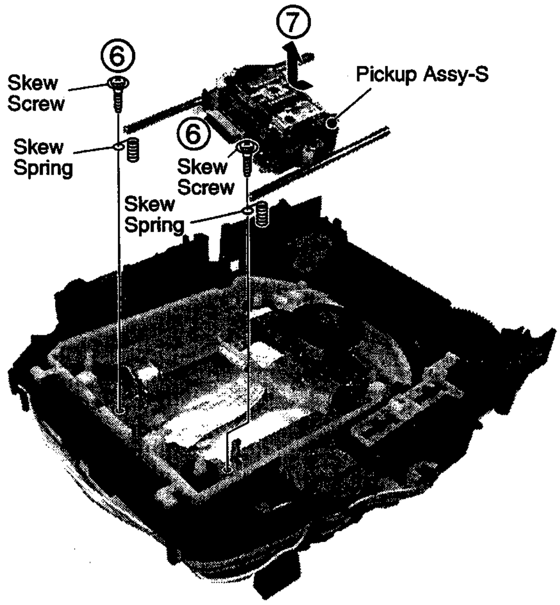
● When Removing The Pickup Assy

⑤ Remove the Pickup Flexible Cable.


⑤
Traverse Mechanism Assy-S

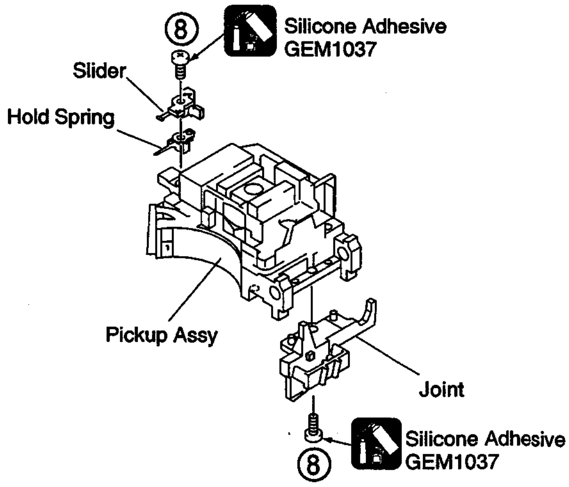
⑥ Remove two Skew Screws and two Skew Springs.

⑦ Remove the Pickup Assy-S.


⑦
⑥
Skew Screw
Pickup Assy-S
Skew Spring
⑥
Skew Screw
Skew Spring

⑧ Remove two screws.

Cautions:
Screw is locked with Silicone adhesive.
Please lock it with Silicone adhesive when installs it.

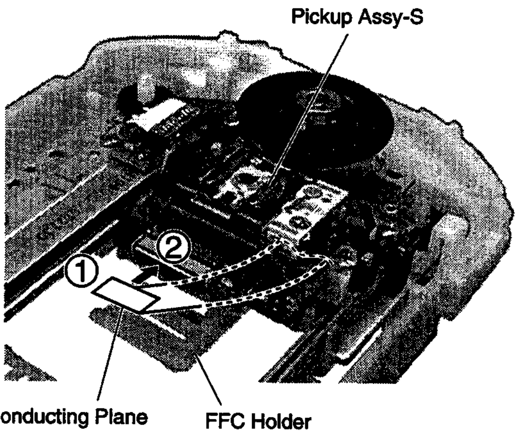

⑧
Silicone Adhesive GEM1037
Slider
Hold Spring
Pickup Assy
Joint
⑧
Silicone Adhesive GEM1037

Exchange

☞ STYLING THE PICKUP FLEXIBLE CABLE

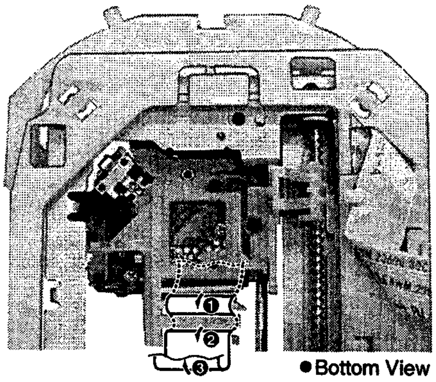
① FOLD a edge of lining part of the Pickup Flexible Cable.

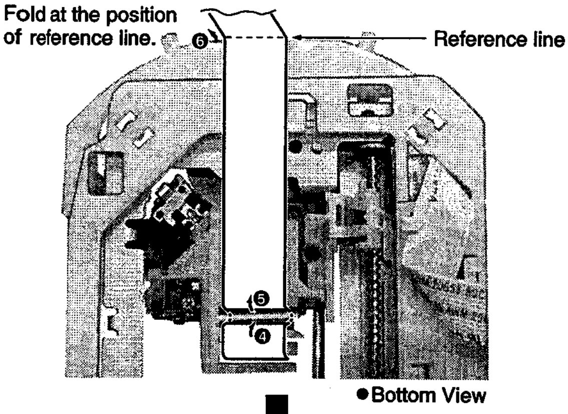
② Insert the Pickup Flexible Cable in connector, and lock it surely.

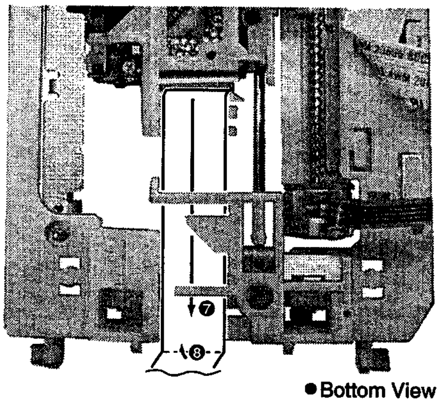

Pickup Assy-S
②
①
Conducting Plane
FFC Holder

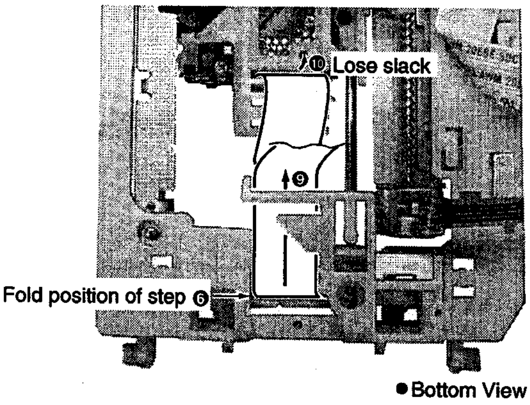
Caution :
Move the Pickup to the innermost of the disc

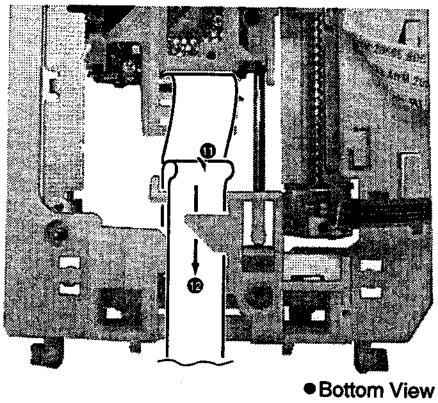
③ Perform the styling as shown in figure below.


❶
❷
❸
● Bottom View


Fold at the position of reference line. ❻
Reference line
❺
❹
● Bottom View


❼
❽
● Bottom View


❿ Lose slack
❾
Fold position of step ❻
● Bottom View


⓫
⓬
● Bottom View

7.2 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

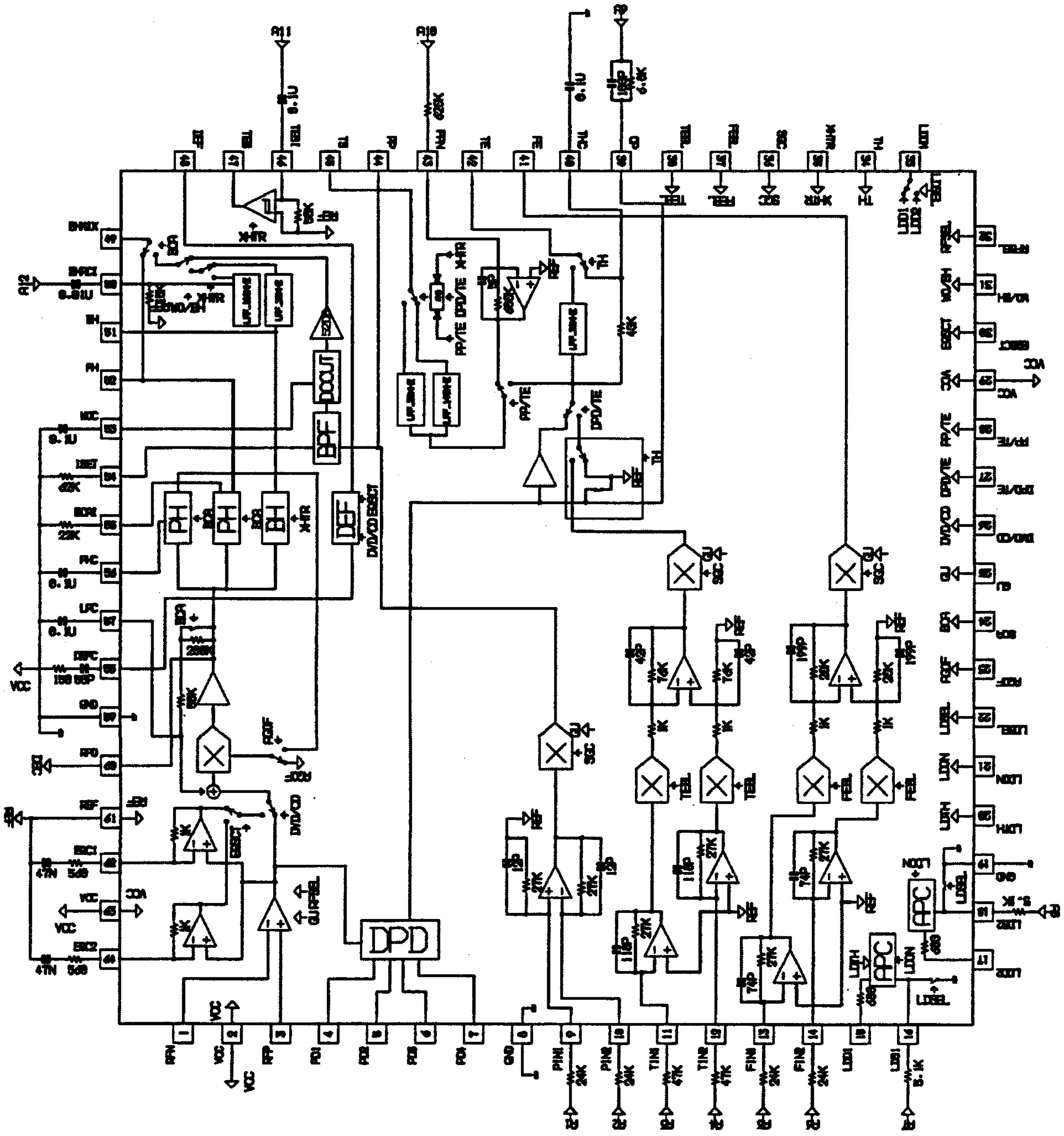
- **List of IC**

LA9704W, LC78652W, BA6664FM, SM8707HV, PD6345A, M65776AFP, PCM1738EG-3, DSD1702EG, LA73054, CXD2753R, PE5314B, PE5286A, PD0274A, ADV7300AKST, PM0033A, TSB43CA43GGW, PD5787A

■ LA9704W (DVDM ASSY : IC101)

- **RF IC**

● **Block Diagram**



DPD
APC
APC
BPF
DCOUT
DEF
PH
PH
BH
RFN
VCC
RFP
PD1
PD2
PD3
PD4
GND
PIN1
PIN2
TIN1
TIN2
FIN1
FIN2
LDD1
LDS1
VCC
GND
0.1U
6.8K
400K
22K
280K
DVD/CD
FP/TE
DPD/TE
XHTR
REF

● Pin Function

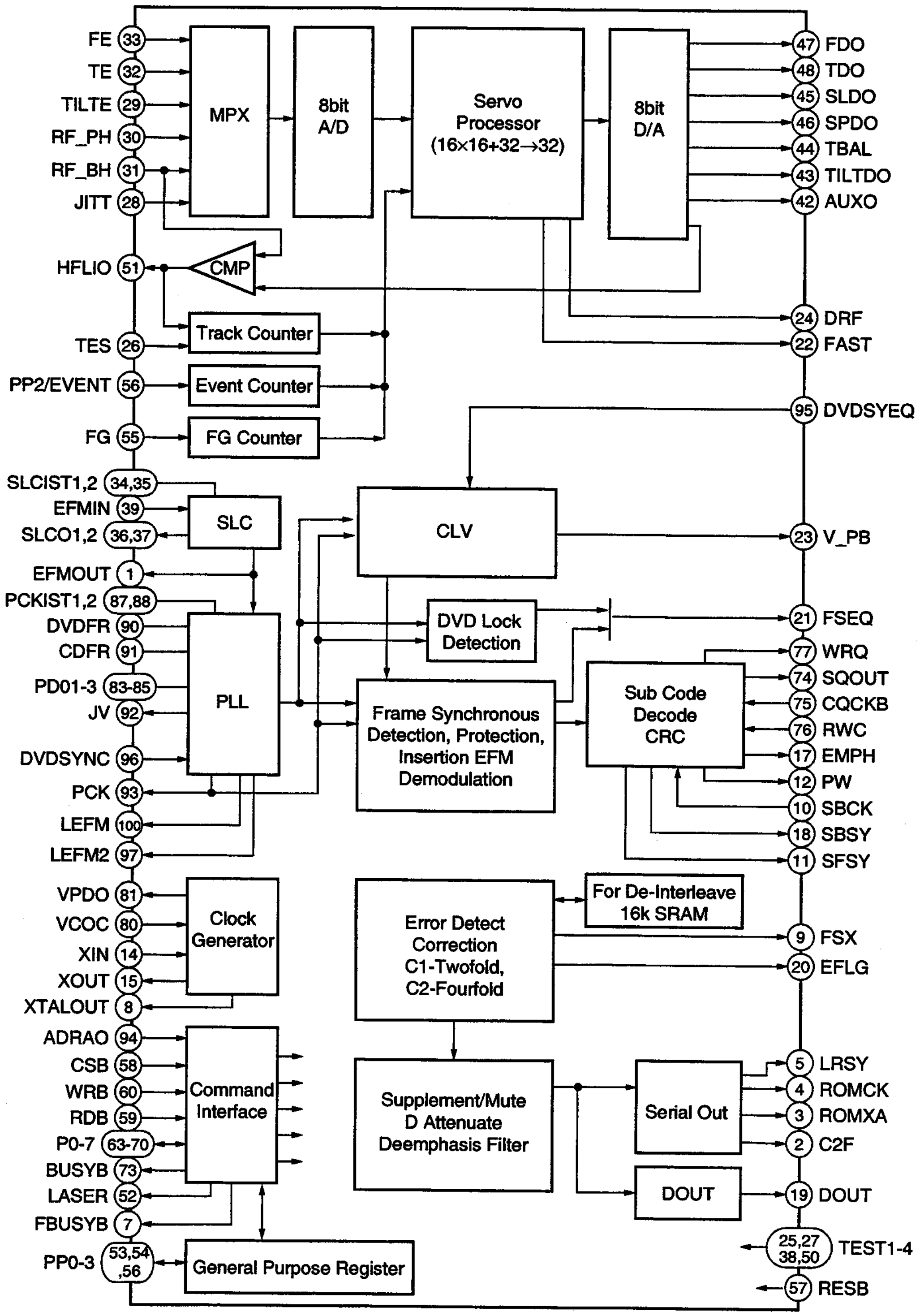
No.	Pin name	Pin Functions
1	RFN	RF- input
2	VCC	Power supply terminal (for DPD)
3	RFP	RF+ nput
4	PD1	Pickup signal input
5	PD2	
6	PD3	
7	PD4	
8	GND	Ground (for DPD)
9	PIN1	Pickup signal input
10	PIN2	
11	TIN1	
12	TIN2	
13	FIN1	
14	FIN2	
15	LDD1	APC1 output
16	LDS1	APC1 monitor input
17	LDD2	APC2 output
18	LDS2	APC2 monitor input
19	GND	Ground (Servo system)
20	LDTH	APC1 threshold change (H: VCC-1.5V, L: 180mV)
21	LDON	Laser ON terminal (H: ON)
22	LDSEL	APC change terminal (H: APC1)
23	AGOF	RFAGC off terminal
24	BCA	PH electric discharge coefficient change (H: BCA mode)
25	GU	RF, Servo signal gain up terminal (H: Gain up)
26	DVD/CD	RF- equalizer band change terminal (H: DVD)
27	DPD/TE	TE output change terminal (H: DPD)
28	PP/TE	TS output change terminal (H: PP)
29	VCC	Power supply terminal (Servo system)
30	EQSCT	EQ change for CD (H: 62 pin choice)
31	WO/BH	BHMIX output change terminal (H: WOBLE)
32	RFSEL	RF amplifier gain change (H: 6dB up)
33	LDDM	LDD monitor terminal
34	TH	Tracking hold (H: hold)
35	XHTR	Tracking, Bottom band change (L: High bandwidth)
36	SGC	Servo gain control terminal (FE, PP, TE)
37	FEBL	FE balance adjustment terminal
38	TEBL	TE balance adjustment terminal
39	CP	Resistance for charge pump gain setting, a condenser connection terminal
40	THC	Volume connection terminal for tracking hold
41	FE	Focus error output
42	TE	Tracking error output
43	PPN	Ohms connection terminal for push-pull gain setting
44	PP	Push-pull output terminal

No.	Pin name	Pin Functions
45	TS	Tracking cross signal output
46	TESI	TES comparator input terminal
47	TES	TES output
48	DEF	Deffect search
49	BHMIX	PH, BH, woble change output
50	BHACI	BH– AC input
51	BH	RF bottom detection output
52	PH	RF peak detection output
53	WOC	Volume connection terminal for DC cut
54	ISET	Ohms connection terminal for BPF center frequency setting
55	BCAI	Ohms connection terminal for peak hold detection fixed number setting (In BCA)
56	PHC	PH detection condenser connection terminal for RF-AGC
57	LPC	Condenser connection terminal for RF DC servo
58	DEFC	Volume connection terminal for deffect search
59	GND	Ground (RF system)
60	RFO	RF output terminal
61	REF	Reference output terminal
62	EQC1	Equalizer setting terminal for CD
63	VCC	Power supply terminal (RF system)
64	EQC2	Equalizer setting terminal for CD

■ LC78652W (DVDM ASSY : IC201)

- **Servo DSP IC**

● Block Diagram


FE 33
TE 32
TILTE 29
RF_PH 30
RF_BH 31
JITT 28
MPX
8bit A/D
Servo Processor (16×16+32→32)
8bit D/A
47 FDO
48 TDO
45 SLDO
46 SPDO
44 TBAL
43 TILTDO
42 AUXO
HFLIO 51
CMP
Track Counter
TES 26
PP2/EVENT 56
Event Counter
FG 55
FG Counter
24 DRF
22 FAST
95 DVDSYEQ
SLCIST1,2 34,35
EFMIN 39
SLCO1,2 36,37
SLC
CLV
23 V_PB
EFMOUT 1
PCKIST1,2 87,88
DVDFR 90
CDFR 91
PD01-3 83-85
JV 92
DVDSYNC 96
PCK 93
LEFM 100
LEFM2 97
PLL
DVD Lock Detection
Frame Synchronous Detection, Protection, Insertion EFM Demodulation
Sub Code Decode CRC
21 FSEQ
77 WRQ
74 SQOUT
75 CQCKB
76 RWC
17 EMPH
12 PW
10 SBCK
18 SBSY
11 SFSY
VPDO 81
VCOC 80
XIN 14
XOUT 15
XTALOUT 8
Clock Generator
Error Detect Correction C1-Twofold, C2-Fourfold
For De-Interleave 16k SRAM
9 FSX
20 EFLG
ADRAO 94
CSB 58
WRB 60
RDB 59
P0-7 63-70
BUSYB 73
LASER 52
FBUSYB 7
PP0-3 53,54,56
Command Interface
General Purpose Register
Supplement/Mute D Attenuate Deemphasis Filter
Serial Out
DOUT
5 LRSY
4 ROMCK
3 ROMXA
2 C2F
19 DOUT
25,27 38,50 TEST1-4
57 RESB

• Pin Function

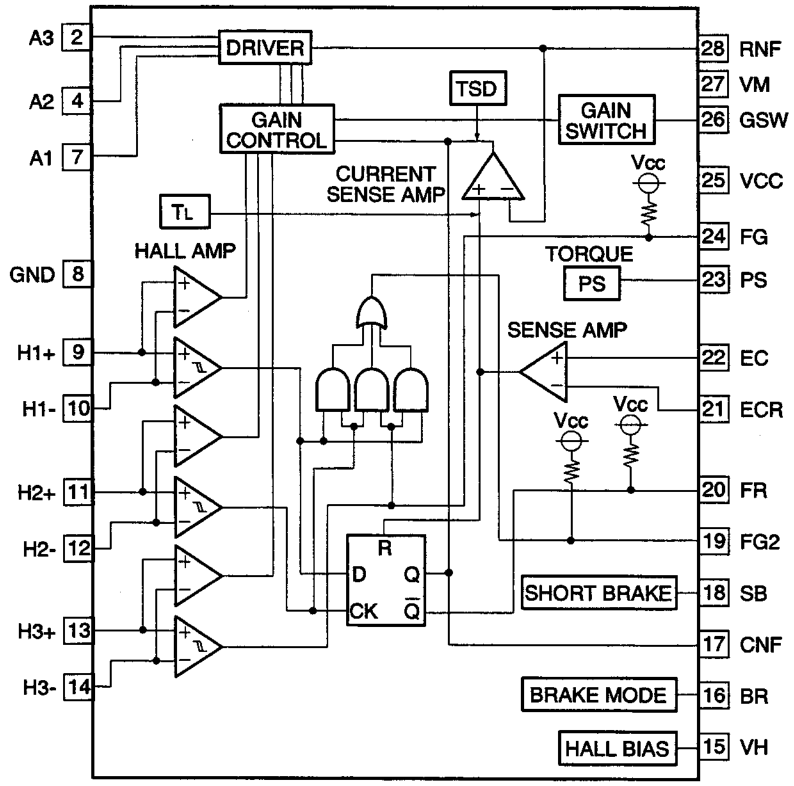
No.	Pin Name	I/O	Pin Function
1	EFMOUT	O	Output the state that was binary-stated value EFM
2	C2F	O	C2 flag output
3	ROMXA	O	CD-ROM data output
4	ROMCK	O	Shift clock output for CD-ROM data output
5	LRSY	O	L/R clock output for CD-ROM data output
6	PP3	I/O	General-purpose port input/output / DVD sync. signal input N ch-OD output
7	FBUSYB	O	Busy signal output of DSP process operation N ch-OD output
8	XTALOUT	O	External system clock output
9	FSX	O	CD 1 frame sync. signal output
10	SBCK	I	Subcode reading out clock input
11	SFSY	O	Frame sync. signal output of subcode
12	PW	O	Subcode P, Q, R, S, T, U, V and W output
13	VSS	–	GND pin
14	XIN	I	Connect a crystal resonator (16.9344MHz)
15	XOUT	O	Connect a crystal resonator
16	DVDD1	–	3.3V power supply of the oscillation circuit
17	EMPH	O	Monitor pin of the deemphasis
18	SBSY	O	Sync. signal output of the subcode block
19	DOUT	O	Audio EIAJ data output
20	EFLG	O	Error correction state monitor of the error correction C1 and C2
21	FSEQ	O	Detection monitor of the CD/DVD frame sync. signal
22	FAST	O	Playback speed monitor N ch-OD output
23	V_PB	O	Monitor output of the rough servo/CLV control
24	DRF	O	In focus monitor
25	TEST3	I	Test input 3
26	TES	I	Tracking error signal input
27	TEST2	I	Test input 2
28	JITT	I	Jitter quantity detecting signal input of EFM PLL
29	TILTE	I	Tilt error signal input
30	RF_PH	I	RF peak hold signal input
31	RF_BH	I	RF bottom hold signal input
32	TE	I	Tracking error signal input
33	FE	I	Focus error signal input
34	SLCIST1	–	Current setting pin 1 of the constant current charge pump for SLC
35	SLCIST2	–	Current setting pin 2 of the constant current charge pump for SLC
36	SLCO1	O	Control output 1 for SLC
37	SLCO2	O	Control output 2 for SLC
38	TEST1	I	Test input 1
39	EFMIN	I	EFM/EFM + input
40	AVDD	–	5V power supply of A/D and D/A for servo
41	AVSS	–	GND of A/D and D/A for servo
42	AUXO	O	DA auxiliary output
43	TILTDO	O	Tilt control signal output
44	TBAL	O	Tracking balance control signal output
45	SLDO	O	Sled control signal output
46	SPDO	O	Spindle control signal output
47	FDO	O	Focus control signal output
48	TDO	O	Tracking control signal output
49	VREF	–	Reference level of D/A for servo
50	TEST4	I	Test input 4

No.	Pin Name	I/O	Pin Function
51	HFLIO	I/O	Mirror detection signal input/output
52	LASER	O	Output pin for laser ON/OFF control
53	PP0/DVD_CDB	I/O	General-purpose port input/output / Disc discrimination signal output
54	PP1/CRCERRB	I/O	General-purpose port input/output / Subcode CRC result signal output
55	FG	I	FG counter input
56	PP2/EVENT	I/O	General-purpose port input/output / Event counter input
57	RESB	I	Reset input
58	CSB	I	Chip select input
59	RDB	I	Internal state reading signal input
60	WRB	I	Command / data writing signal input
61	DVDD2	–	5V power supply
62	VSS	–	GND
63	P0	I/O	Command / data input/output
64	P1		
65	P2		
66	P3		
67	P4		
68	P5		
69	P6		
70	P7		
71	VSS	–	GND
72	DVDD1	–	3.3V power supply for internal
73	BUSYB	O	Busy signal output of command process
74	SQOUT	O	Serial output of subcode Q
75	CQCKB	I	Shift clock input for subcode Q data output
76	RWC	I	Update permission input of subcode Q
77	WRQ	O	Read out ready monitor of subcode Q
78	AVSS	–	PLL GND for internal system clock
79	VRPFR	–	VCO oscillation range setting of PLL for system clock
80	VCOC	I	Connect a PLL filter for system clock
81	VPDO	O	
82	AVDD	–	PLL 5V power supply for system clock
83	PDO1	I/O	PLL filter connection pin 1 for EFM playback
84	PDO2	I/O	PLL filter connection pin 2 for EFM playback
85	PDO3	I/O	PLL filter connection pin 3 for EFM playback
86	AVSS	–	PLL GND for EFM playback
87	PCKIST1	–	Current setting 1 of PLL constant current charge pump for EFM playback
88	PCKIST2	–	Current setting 2 of PLL constant current charge pump for EFM playback
89	AVDD	–	PLL 5V power supply for EFM playback
90	DVDFR	–	VCO oscillation range setting of PLL for EFM playback 1
91	CDFR	–	VCO oscillation range setting of PLL for EFM playback 2
92	JV	O	Jitter output of PLL clock for EFM playback
93	PCK	O	Bit clock output for EFM playback
94	ADRAO	I	Address input
95	DVDSYEQ	I	DVD synchronize pulse input
96	DVDSYNC	I	DVD synchronous signal input
97	LEFM2	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 2
98	DVDD1	–	3.3V power supply for I/O
99	VSS	–	GND
100	LEFM	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 1

BA6664FM (DVDM ASSY : IC251)

- **Three-phase Motor Driver**

Block Diagram


A3 2
A2 4
A1 7
GND 8
H1+ 9
H1- 10
H2+ 11
H2- 12
H3+ 13
H3- 14
DRIVER
GAIN CONTROL
TSD
GAIN SWITCH
CURRENT SENSE AMP
TL
HALL AMP
Vcc
TORQUE
PS
SENSE AMP
R
D
Q
CK
Q̄
SHORT BRAKE
BRAKE MODE
HALL BIAS
28 RNF
27 VM
26 GSW
25 VCC
24 FG
23 PS
22 EC
21 ECR
20 FR
19 FG2
18 SB
17 CNF
16 BR
15 VH

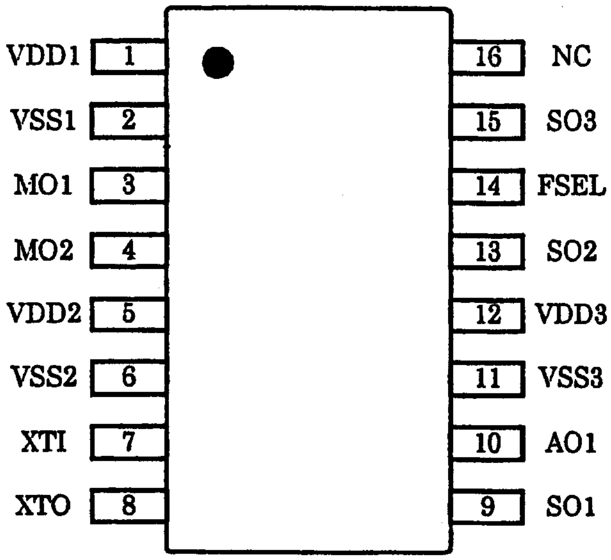
Pin Function

No.	Pin Name	Pin Function	No.	Pin Name	Pin Function
1	N.C.	N.C.	16	BR	Brake mode switching pin
2	A3	Output pin	17	CNF	Capacitor connection pin for phase compensation
3	N.C.	N.C.	18	SB	Short brake pin
4	A2	Output pin	19	FG2	FG 3-phase mix signal output pin
5	N.C.	N.C.	20	FR	Rotation detecting pin
6	N.C.	N.C.	21	ECR	Control reference pin of output voltage
7	A1	Output pin	22	EC	Output voltage control pin
8	GND	GND pin	23	PS	Power save pin
9	H1+	Hall signal input pins	24	FG	FG signal output pin
10	H1-		25	VCC	Power supply pin
11	H2+		26	GSW	Gain switching pin
12	H2-		27	VM	Motor power pin
13	H3+		28	RNF	Resistor connection pin for output current detection
14	H3-		FIN	FIN	GND
15	VH	Hall bias pin			

■ SM8707HV (DVDM ASSY : IC481)

• Clock Generate IC

● Pin Arrangement



(Top View)

● Pin Function

No.	Pin name	Dir.	Pin Functions
1	VDD1	PWR	Power supply terminal 1 (digital business)
2	VSS1	GND	Earth terminal 1 (digital business)
3	MO1	OUT	Video output terminal 1 (the 27MHz fixed output)
4	MO2	OUT	Video output terminal 2 (the 27MHz fixed output)
5	VDD2	PWR	Power supply terminal 2 (analog business)
6	VSS2	GND	Earth terminal 2 (analog business)
7	XTI	IN	External clock input terminal or crystal resonator connection
8	XTO	OUT	Crystal resonator connection terminal
9	SO1	OUT	Signal conditioning system output terminal 1 (36.8640MHz fixation)
10	AO1	OUT	Sound output terminal 1 (the 512fs output)
11	VSS3	GND	Earth terminal 3 (digital business)
12	VDD3	PWR	Power supply terminal 3 (digital business)
13	SO2	OUT	Signal conditioning system output terminal 2 (16.9344MHz fixation)
14	FSEL	IN	Sampling frequency change terminal FSEL= "L": fs=48kHz FSEL= "H": fs=44.1kHz (There is inside pull-up resister, Schmidt trigger input)
15	SO3	OUT	Signal conditioning system output terminal 3 (33.8688MHz fixation)
16	NC	–	Unused terminal

■ PD6345A (DVDM ASSY : IC601)

• FR CPU

● Pin Function

No.	Mark	Pin Name	I/O	Pin Function
1	P20/D16	D0	I/O	Data bus input/output
2	P21/D17	D1		
3	P22/D18	D2		
4	P23/D19	D3		
5	P24/D20	D4		
6	P25/D21	D5		
7	P26/D22	D6		
8	P27/D23	D7		
9	P30/D24	D8		
10	P31/D25	D9		
11	P32/D26	D10		
12	P33/D27	D11		
13	P34/D28	D12		
14	P35/D29	D13		
15	P36/D30	D14		
16	P37/D31	D15		
17	VSS	GND	–	Ground
18	P40/A00	A0	O	Address bus output
19	P41/A01	A1		
20	P42/A02	A2		
21	P43/A03	A3		
22	P44/A04	A4		
23	P45/A05	A5		
24	P46/A06	A6		
25	P47/A07	A7		
26	VCC3	V+3.3D	–	Power supply
27	VCC2	V+2.5D	–	Power supply
28	P50/A08	A8	O	Address bus output
29	P51/A09	A9		
30	P52/A10	A10		
31	P53/A11	A11		
32	P54/A12	A12		
33	P55/A13	A13		
34	P56/A14	A14		
35	P57/A15	A15		
36	VSS	GND	–	Ground
37	P60/A16	A16	O	Address bus output
38	P61/A17	A17		
39	P62/A18	A18		
40	P63/A19	A19		
41	P64/A20	A20		
42	P65/A21	A21		
43	P66/A22	A22		
44	P67/A23	WBL	O	For Wobble detection corresponding to DVD R/W (main)
45	DAVS	GND	–	Ground
46	DAVC	V+3.3D	–	Power supply
47	DA0	STEP1	I	For stepping motor control
48	DA1	STEP2	I	
49	DA2	LODRV	I	Loading, door and select motor drive

No.	Mark	Pin Name	I/O	Pin Function
50	AN0	NC	I	NC
51	AN1	NC	I	NC
52	AN2	NC	I	NC
53	AN3	XOEM	I	OEM model protection input
54	AN4	LDREAD	I	Input for LD current value indication
55	AN5	NC	I	NC
56	AN6	NC	I	NC
57	AN7	LODPOS	I	Loading clamp position SW input
58	AVCC	V+3.3D	–	Power supply
59	AVRH	V+3.3D	–	Power supply
60	AVSS/AVRI	GND	–	Ground
61	VSS	GND	–	Ground
62	PP0/ATGX	SLDPOS	I	SW input of slider inside position
63	PP1/FRCK	GSW	O	Gain up at ACBR (at ACBR: H, others: L)
64	PP2/IN0	780ON	I	ON/OFF control signal of 780nm laser diode
65	PP3/IN1	GU	O	RF, servo signal gain up terminal (H: Gain up)
66	PP4/IN2	XMON	O	Mute of DRV (spindle motor ON: H)
67	PP5/IN3	XDRVMUT	O	FTS driver mute output
68	PP6	LT1_3V	O	Communication response to the FL controller
69	PP7	XRDY_3V	I	Communication request from the FL controller
70	VCC3	V+3.3D	–	Power supply
71	VCC2	V+2.5D	–	Power supply
72	P00/OC0	XCURDET	I	Actuator current detection input Servo OFF for "L" 300ms
73	P01/OC1	XCBUSY	I	Busy signal of command process Command acceptable : "L"
74	P02/OC2	XDSPRST	O	Servo DSP reset
75	P03/OC3	BCA	–	BCA read signal (at BCA read: H) (Not used)
76	P04/OC4	NC	I	NC
77	P05/OC5	PPCNT	O	Switch of TZC in WBL traversal (at PP: H)
78	P06/OC6	XDFINH	O	Defect signal control (DEFECT ON: Hi-Z; OFF: "L")
79	P07/OC7	DPD/TE	O	H=1 beam, L=3 beams
80	VSS	GND	–	Ground
81	PN0/AIN0	DVD/XCD	O	RF EQ switching signal at DVD/CD "H": DVD, "L": CD
82	PN1/BIN0	AGOFF	O	"H": Turn off AGC of RFIC
83	PN2/AIN1	650X780	O	780nm/650nm switching signal
84	PN3/BIN1	LD ON	O	ON/OFF control signal of laser diode
85	PN4/AIN2	WBLSEL	O	NC
86	PN5/BIN2	RFSEL	O	RF amplifier gain change terminal (H: Gain up)
87	PN6/AIN3	XCD2X	O	For VCD double speed playback
88	PN7/BIN3	OEICG	O	"H": Gain of OEIC up to 6dB
89	PM0/ZIN0	EN33M	O	NC
90	PM1/ZIN1	EN24M	O	NC
91	PM2/ZIN2	V SEL	O	(Composite, S) / (YCbCr) or (RGB) switch
92	PM3/ZIN3	V SEL2	O	(Composite) of scart terminal / (S) switch
93	PL0/SDA1	SDAI	12C Serial	12C control lines
94	PL1/SDA0	NC	–	NC
95	PL2/SCL1	SCLI	12C Serial	12C control lines
96	PL3/SCL0	NC	–	NC
97	PL4	CTS	I	RS-232C clear to send input
98	PL5	DTR	O	RS-232C clear to send output
99	PL6/UC0	NC	O	NC
100	VSS	GND	–	Ground

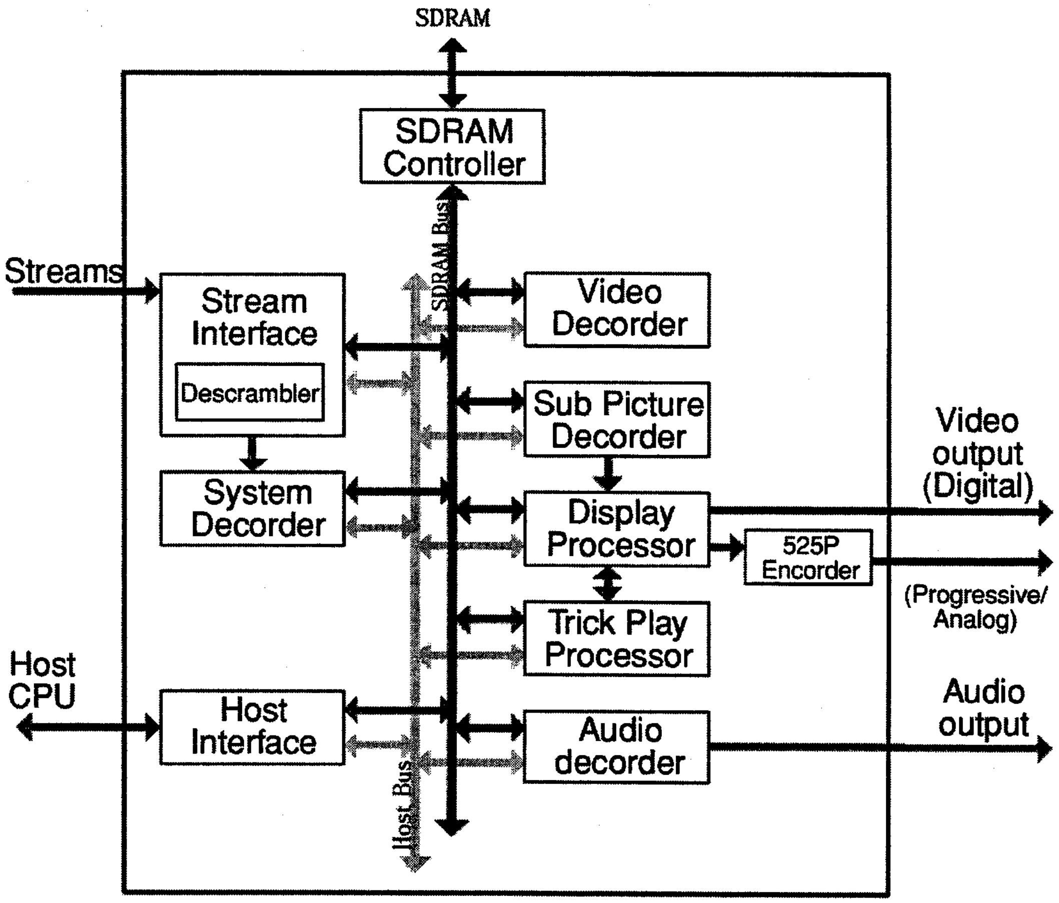
No.	Mark	Pin Name	I/O	Pin Function
101	PK0/TIN0	XVQERST	O	VQE3 reset signal
102	PK1/TIN1	XCSPRO1	–	Serial communication enable of the progressive converter IC
103	PK2/TIN2	XCSVQE5	–	Serial communication enable of VQE5 IC
104	PK3/TIN3	EN16M	O	N.C.
105	PK4/TOT0	44X48	O	DAC and DASP supply clock fs 44/48 selection
106	PK5/TOT1	1394XRDY	I	N.C.
107	PK6/TOT2	AOSEL1	O	AV-1/audio DSP switch (front L/R data)
108	PK7/TOT3	P/XI	O	Progressive/Inter race change signal
109	VCC3	V+3.3D	–	Power supply
110	VCC2	V+2.5D	–	Power supply
111	PJ0/INT0	XINT0	I	
112	PJ1/INT1	XINT1	I	
113	PJ2/INT2	XIRQ10	I	MY chip interrupt #0
114	PJ3/INT3	XIRQ11	I	MY chip interrupt #1
115	PJ4/INT4	XABUSY	I	Busy signal of DSP process operation "L"
116	PJ5/INT5	THLD	I	Playback speed monitoring signal
117	PJ6/INT6	SBSY	I	Sync. signal of subcode block (period SO+SI "H")
118	PJ7/INT7	N.C.	I	N.C.
119	PI0/SI0	SSI	I	Serial bus data input
120	PI1/SO0	SSO_3V	O	Serial bus data output
121	PI2/SCK0	SSCK_3V	I	Serial bus clock input
122	PI3/SI1	RXD_3V	I	RS-232C RXD
123	PI4/SO1	TXD_3V	O	RS-232C TXD
124	PI5/SCK1	NC	O	NC
125	PH0/SI2	1394LT	O	NC
126	PH1/SO2	DSPICM	I	Audio system DSP serial communication Readv signal
127	PH2/SCK2	NC	I	NC
128	MD0	GND	–	Ground
129	MD1	GND	–	
130	MD2	GND	–	
131	VSS	GND	–	Ground
132	VCC2	V+2.5D	–	Power supply
133	VSS	GND	–	Ground
134	X1	EXTAL	O	
135	X0	XTAL	I	
136	VCC3	V+3.3D	–	Power supply
137	PC0/DREQ2	RESET1	O	Audio system DSP reset
138	PC1/DACK2	XCSADSP0	O	Chip select port for audio system DSP
139	PC2/DEOP2	XCSDF2	O	DAC chip select (for surround system L/R)
140	PB0/DREQ0	XDREQ0	I	DMA response output to BY Chip
141	PB1/DACK0	DACK0	O	DMA request input from BY Chip
142	PB2/DEOP0	ENCD	O	N.C.
143	PB3/DREQ1	XDREQ1	I	DMA response output to AV-1 Chip
144	PB4/DACK1	XDACK1	O	DMA request input from AV-1 Chip
145	PB5/DEOP1	EN_FLOW	O	N.C.
146	PB6/IOWRX	XCOMP	O	RGB/color difference change of video driver
147	PB7/IORDX	XCSDF3	O	N.C.
148	VSS	GND	–	Ground
149	PA0/CSOX	XCS20	O	Chip select output to Flash ROM
150	PA1/CS1X	XCS6	O	AV-1 Chip select

No.	Mark	Pin Name	I/O	Pin Function
151	PA2/CS2X	XCS3	O	Chip select of PD4995A (MY Chip)
152	PA3/CS3X	XCS4	O	Chip select of servo DSP
153	PA4/CS4X	XCS23	O	Chip select output to SRAM (1M)
154	PA5/CS5X	N.C.	O	N.C.
155	PA6/CS6X	N.C.	O	N.C.
156	PA7/CS7X	N.C.	O	N.C.
157	VCC3	V+3.3D	–	Power supply
158	VCC2	V+2.5D	–	Power supply
159	NMIX	–	–	V+3.3D fixed
160	HSTX	–	–	V+2.5D fixed
161	INITX	XINIT	I	
162	P80/RDY	RDY	I	
163	P81/BGRNTX	XAMUTE	I	Final stage mute of 2 ch audio output
164	P82/BRQ	XMMUTE	O	Audio multi channel mute
165	P83/RDX	XRD	O	
166	P84/WR0X	XWR0	O	
167	P85/WR1X	XWR1	O	
168	VSS	GND	–	Ground
169	P90/SYSCLK	SYSCLK	O	N.C.
170	P91	DFRST	–	DAC reset (for front L/R)
171	P92/MCLK	DFRST1	–	DAC reset (for center, surround and LFE)
172	P93	XCSDF0	O	DAC chip select (←XLAT3)
173	P94/LBAX	XCSDF1	O	DAC chip select for center, surround and LFE
174	P95/BAAX	XAQRST	O	AQE reset
175	P96	XCSAQE	O	AQE chip select
176	P97/WEX	TM ENT	I	Test mode entry

■ M65776AFP (DVDM ASSY : IC751)

- MPEG2 Decorder IC

● **Block Diagram**


SDRAM
SDRAM Controller
SDRAM Bus
Streams
Stream Interface
Descrambler
System Decorder
Host CPU
Host Interface
Host Bus
Video Decorder
Sub Picture Decorder
Display Processor
525P Encorder
Trick Play Processor
Audio decorder
Video output (Digital)
(Progressive/ Analog)
Audio output

● Pin Function

No.	Pin name	Dir.	Pin Functions
201-208	BD [7:0]	IN	Bit stream data entry pin
2	BCLK	IN	Strobe signal of BD pin (clock)
3	BDEN	IN	This order effective / invalidity of data done a sample of by BD pin. It is done a sample with a start edge of BCLK.
4	BDREQ	OUT	Data demand signal
5	BSECH	IN	This order it whether data of BD pin are with top byte of a sector.
84-87 90-95 97-102	MD [15:0]	I/O	Data transfer line with SDRAM
53-55 58-63 65, 67, 69	MA [11:0]	OUT	Address line of SDRAM
66, 68	MBA [1:0]	OUT	SDRAM bank choice line
70	DCS	OUT	Chip select of SDRAM
73	DCS2		
74	DCS3		
75	DCS4		
76	DCS5		
77	RAS	OUT	RAS (Row Address Strobe) control line of SDRAM
78	CAS	OUT	CAS (Column Address Strobe) control line of SDRAM
82	DQMU	OUT	DQM control line of SDRAM
83	DQML	OUT	DQM control line of SDRAM
80	DWE	OUT	WE control line of SDRAM
79	MCLK	OUT	Movement clock of SDRAM
183	PXCLK	OUT	27MHz pixel clock
182	PXCLKP	OUT	54MHz pixel clock
157, 158, 184-186 188-192	PD [7:0]	OUT	Digital pixel data. Y/Cb/Cr is done multiple of by 8 bit bus, and it is output.
178	CSYNC	IN	Composite SYNC signal input terminal
179	OSDKEY	OUT	OSD key flag output
177	PWD	OUT	The phase comparator output for external synchronization movement
181	HSYNC	OUT	Horizontal synchronizing signal output pin
180	VSYNC	OUT	Vertical synchronizing signal output pin
164	AO0	OUT	Serial PCM data for DAC It output Lf/Rf data.
166	AO1	OUT	Serial PCM data for DAC It output C/Sw data.
167	AO2	OUT	Serial PCM data for DAC It output Ls/Rs data.
168	AOD	OUT	Serial PCM data for DAC It is for the down mixture output.
169	AAD	OUT	Anciallary data output
176	DOCLK	OUT	PCM bit clock
159	LRCLK	OUT	Clock for channel distinction of pulse code modulation audio system data (L/R)
173	DACCLK	OUT	Exaggerated sample movement clock of DAC
161	CDBCK	IN	The pulse code modulation bit clock which is input by CDDSP
160	CDLRCK	IN	The L/R clock which is input by CDDSP

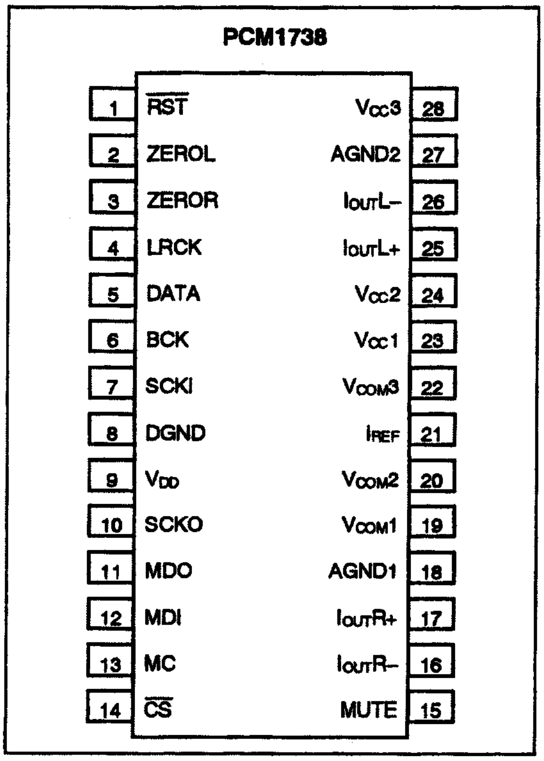
No.	Pin name	Dir.	Pin Functions
163	CDDIN	IN	PCM audio system data which are input by CDDSP
162	CDDATA	IN	Digital audio interface input
170	DOUT0	OUT	Digital audio interface output
171	DOUT1	OUT	Digital audio interface output
6-11 14-19 21-24	HD [15:0]	I/O	Data I/O pin
25, 26 29-34 36-39	HA [11:0]	IN	Address input pin
45	BHE	IN	Byte High Enable signal input pin
41	RE	IN	Read Enable signal input pin
44	WE	IN	Write Enable signal input pin
40	CS	IN	Chip Select signal input pin
46	RDY	OUT	The acknowledge signal which shows that readout of data or a note was completed
47	INT1	OUT	It is an interrupt request signal for outside CPU from M65776AFP
48	INT2		
49	INT3		
51	DREQ	OUT	DMA request signal for OSD BitMap transfer
52	DACK	IN	DMA acknowledge signal for OSD BitMap transfer
194, 195	HMODE [1:0]	IN	Host interface mode of operation setting pin
117	IREF	IN	Reference electric current input pin
115	AVRI	IN	Reference voltage input pin
120	BIAS1	IN	Bias voltage impression pin of current source
118	BIAS2		
119	PAY	OUT	Analog electric current output pin (for Y)
116	PAB	OUT	Analog electric current output pin (for Pb)
122	PAR	OUT	Analog electric current output pin (for Pr)
114	DAOUTB	OUT	Be connected to an analog ground.
113, 121, 123	AVDD33	–	3.3V analog power supply
124	AGND33	–	Analog ground
106	CLKIN	IN	System clock input terminal It input 27MHz clock.
105	CLKO	OUT	27MHz clock output
172	ACLKI	IN	Audio system clock input terminal
193	RESET	IN	Hardware reset terminal
196, 197, 200	TEST [2:0]	IN	Fix it in "L" potential.
12, 27, 42, 56, 71, 88, 103, 134, 155, 174, 198	VDD18	–	1.8V power supply terminal
13, 28, 43, 57, 72, 89, 104, 135, 156, 175, 199	VDD33	–	3.3V power supply terminal

No.	Pin name	Dir.	Pin Functions
1, 20, 35, 50, 64, 81, 96, 112, 125, 145, 165, 187	GND	–	Ground terminal
107	AVDD18	–	1.8V power supply terminal for inside PLL
108	AGND18	–	Ground terminal for inside PLL
109-111 126-133 136-144 146-154	NC0	NC	

■ PCM1738EG-3 (JACB ASSY : IC301)

• D/A Converter IC

● Pin Arrangement


PCM1738
1 $\overline{RST}$
2 ZEROL
3 ZEROR
4 LRCK
5 DATA
6 BCK
7 SCKI
8 DGND
9 V_{DD}
10 SCKO
11 MDO
12 MDI
13 MC
14 $\overline{CS}$
28 $V_{CC}3$
27 AGND2
26 $I_{OUT}L-$
25 $I_{OUT}L+$
24 $V_{CC}2$
23 $V_{CC}1$
22 $V_{COM}3$
21 I_{REF}
20 $V_{COM}2$
19 $V_{COM}1$
18 AGND1
17 $I_{OUT}R+$
16 $I_{OUT}R-$
15 MUTE

● Pin Function

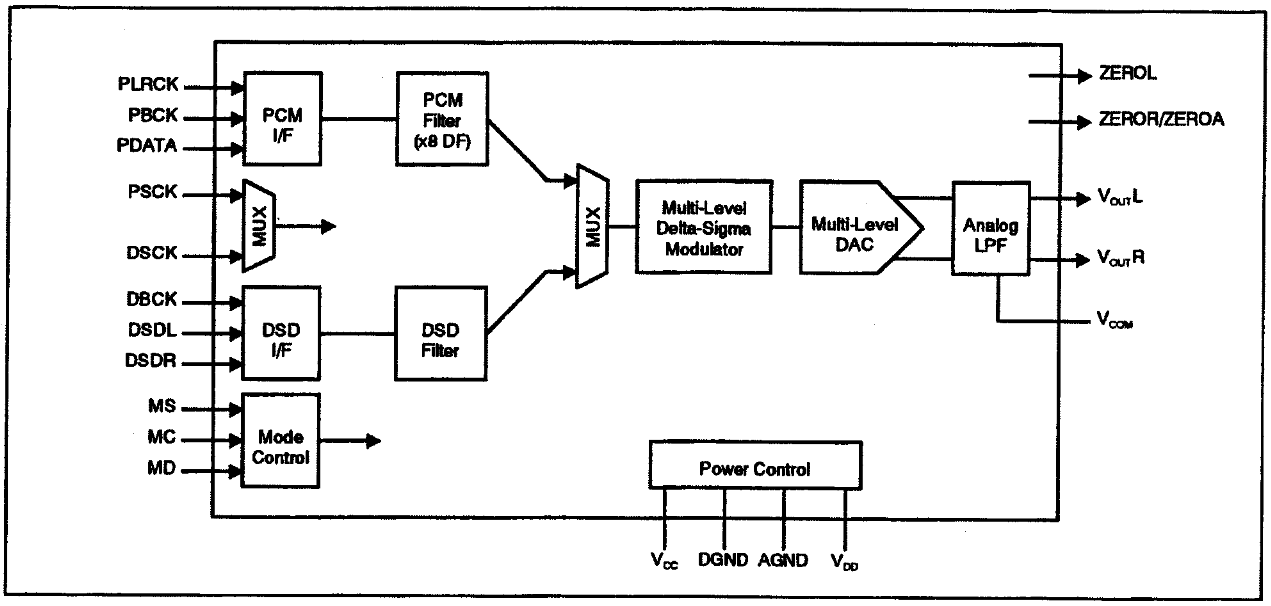
PIN	NAME	TYPE	DESCRIPTIONS
1	$\overline{RST}$	IN	Reset (1)
2	ZEROL	OUT	Zero Flag for L-channel
3	ZEROR	OUT	Zero Flag for R-channel
4	LRCK	IN	Left and Right Clock (f_S) Input for Normal operation. (1) WDCK clock input in External DF mode. Connected to GND in DSD mode.
5	DATA	IN	Serial Audio Data Input for Normal operation. (1) L-channel audio data input for External DF and DSD modes.
6	BCK	IN	Bit Clock. Input. Connected GND for DSD mode. (1)
7	SCKI	IN	System Clock Input. BCK (64 f_S) clock input for (1) DSD mode
8	DGND	-	Digital Ground
9	V_{DD}	-	Digital Supply, +3.3 V
10	SCKO	OUT	System Clock Output
11	MDO	OUT	Serial data output for function control register (2)
12	MDI	IN	Serial data input for function control register (1)
13	MC	IN	Shift Clock for function control register (1)
14	$\overline{CS}$	IN	Mode control chip select and latch signal. (1)
15	MUTE	IN	Analog output mute control for normal operation (1) R-channel audio data input for external DF mode and DSD mode.
16	$I_{OUT}R-$	OUT	R-channel Analog Current Output –
17	$I_{OUT}R+$	OUT	R-channel Analog Current Output +
18	AGND1	-	Analog Ground.
19	$V_{COM}1$	-	Internal bias de-coupling pin
20	$V_{COM}2$	-	Common voltage for I/V
21	I_{REF}	-	Output current reference bias pin. Connect 16KΩ resistor to GND
22	$V_{COM}3$	-	Internal bias de-coupling pin
23	$V_{CC}1$	-	Analog Supply, +5.0 V
24	$V_{CC}2$	-	Analog Supply, +5.0 V
25	$I_{OUT}L+$	OUT	L-channel Analog Current Output +
26	$I_{OUT}L-$	OUT	L-channel Analog Current Output –
27	AGND2	-	Analog Ground
28	Vcc3	-	Analog Power Supply, +5.0V

NOTES:
(1) Schmitt trigger input, 5 V tolerant.
(2) Tristate output.

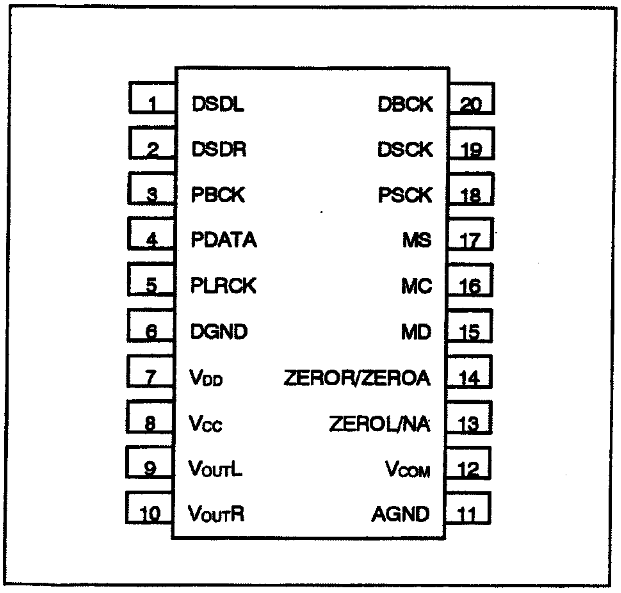
DSD1702EG (JACB ASSY : IC401, IC501)

- D/A Converter IC

Block Diagram


PLRCK
PBCK
PDATA
PSCK
DSCK
DBCK
DSDL
DSDR
MS
MC
MD
PCM I/F
PCM Filter (x8 DF)
MUX
DSD I/F
DSD Filter
Mode Control
MUX
Multi-Level Delta-Sigma Modulator
Multi-Level DAC
Analog LPF
ZEROL
ZEROR/ZEROA
$V_{OUT}L$
$V_{OUT}R$
V_{COM}
Power Control
V_{CC}
DGND
AGND
V_{DD}

Pin Arrangement


1 DSDL
2 DSDR
3 PBCK
4 PDATA
5 PLRCK
6 DGND
7 V_{DD}
8 V_{CC}
9 $V_{OUT}L$
10 $V_{OUT}R$
20 DBCK
19 DSCK
18 PSCK
17 MS
16 MC
15 MD
14 ZEROR/ZEROA
13 ZEROL/NA
12 V_{COM}
11 AGND

Pin Function

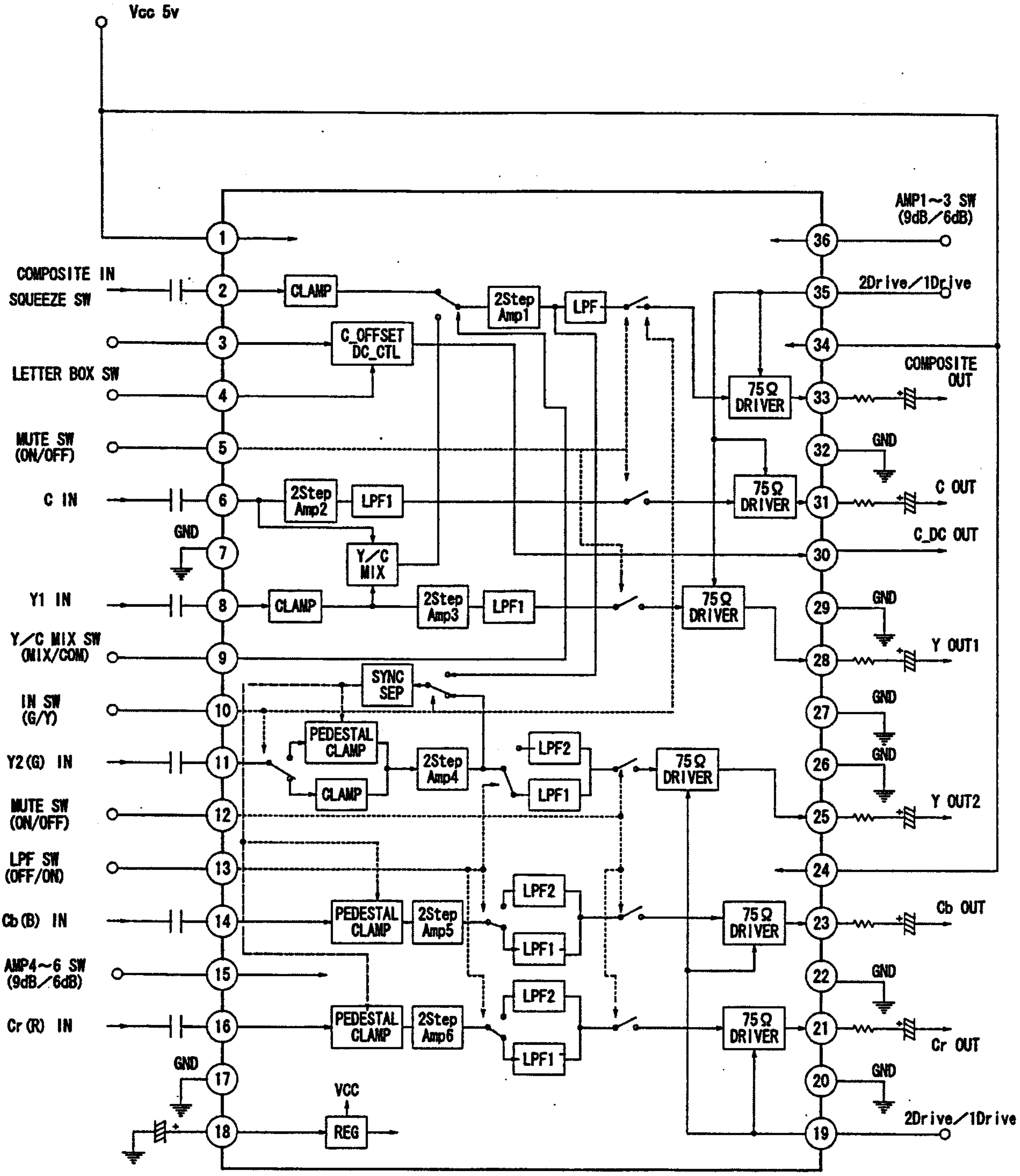
PIN	NAME	TYPE	DESCRIPTIONS
1	DSDL	IN	Audio data digital input (DSD L-channel) (1)
2	DSDR	IN	Audio data digital input (DSD R-channel) (1)
3	PBCK	IN	Audio data bit clock input. (PCM) (1)
4	PDATA	IN	Audio data digital input. (PCM) (1)
5	PLRCK	IN	Audio data latch enable input. (PCM) (1)
6	DGND	-	Digital ground.
7	V_{DD}	-	Digital power supply, + 3.3 V.
8	V_{CC}	-	Analog power supply, + 5 V.
9	$V_{OUT}L$	OUT	Analog output for L-channel.
10	$V_{OUT}R$	OUT	Analog output for R-channel.
11	AGND	-	Analog ground.
12	V_{COM}	-	Common voltage decoupling.
13	ZEROR/ZEROA	OUT	Zero flag output for R-channel / Zero flag output for L/R-channel.
14	ZEROL/NA	OUT	Zero flag output for L-channel / No assign.
15	MD	IN	Mode control data Input. (2)
16	MC	IN	Mode control clock input. (2)
17	MS	IN	Chip Select for Mode control. (2)
18	PSCK	IN	System clock input. (PCM) (1)
19	DSCK	IN	System clock input. (DSD) (1)
20	DBCK	IN	Audio data bit clock input. (DSD) (1)

Note:
(1) Schmidt trigger input, 5 V tolerant.
(2) Schmidt trigger input with internal pull-down, 5 V tolerant.

■ LA73054 (JACB ASSY : IC701)

- **DVD Video Amplifier**

● Block Diagram


Vcc 5v
COMPOSITE IN
SQUEEZE SW
LETTER BOX SW
MUTE SW
(ON/OFF)
C IN
GND
Y1 IN
Y/C MIX SW
(MIX/COM)
IN SW
(G/Y)
Y2(G) IN
MUTE SW
(ON/OFF)
LPF SW
(OFF/ON)
Cb(B) IN
AMP4~6 SW
(9dB/6dB)
Cr(R) IN
GND
CLAMP
C_OFFSET
DC_CTL
2Step
Amp1
LPF
2Step
Amp2
LPF1
Y/C
MIX
CLAMP
2Step
Amp3
LPF1
SYNC
SEP
PEDESTAL
CLAMP
CLAMP
2Step
Amp4
LPF2
LPF1
PEDESTAL
CLAMP
2Step
Amp5
LPF2
LPF1
PEDESTAL
CLAMP
2Step
Amp6
LPF2
LPF1
VCC
REG
75Ω
DRIVER
75Ω
DRIVER
75Ω
DRIVER
75Ω
DRIVER
75Ω
DRIVER
75Ω
DRIVER
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
AMP1~3 SW
(9dB/6dB)
2Drive/1Drive
COMPOSITE
OUT
GND
C OUT
C_DC OUT
GND
Y OUT1
GND
GND
Y OUT2
Cb OUT
GND
Cr OUT
GND
2Drive/1Drive

● Pin Function

No.	Pin Functions		0– 0.7V (LOW)	2.6– 5V (HIGH)
36	AMP-GAIN change for composite/S		6 dB	9 dB
15	AMP-GAIN change for component		6 dB	9 dB
35	Drive electric current change for composite/S		2 system drive	1 system drive
19	Drive electric current change for component		2 system drive	1 system drive
5	Mute control for composite/S	In 10 pin LOW	It is not do mute	33, 31, 28 pin mute
		In 10 pin HIGH	It is not do mute	31, 28 pin mute
12	Mute control for component		It is not do mute	25, 23, 21 pin mute
9	The control of Y/C– MIX		In composite	In Y/C– MIX
10	11 pin input form change		In the component input	In the baseband input
13	LPF characteristic change for component		Inter race correspondence	Progressive correspondence

2 pin falls to GND in Y/C-MIX.

11 pin is clamp, and the Y signal input, 14, 16 pin input a CB, CR signal into NTSC (in the component input) with pedestal clamp.

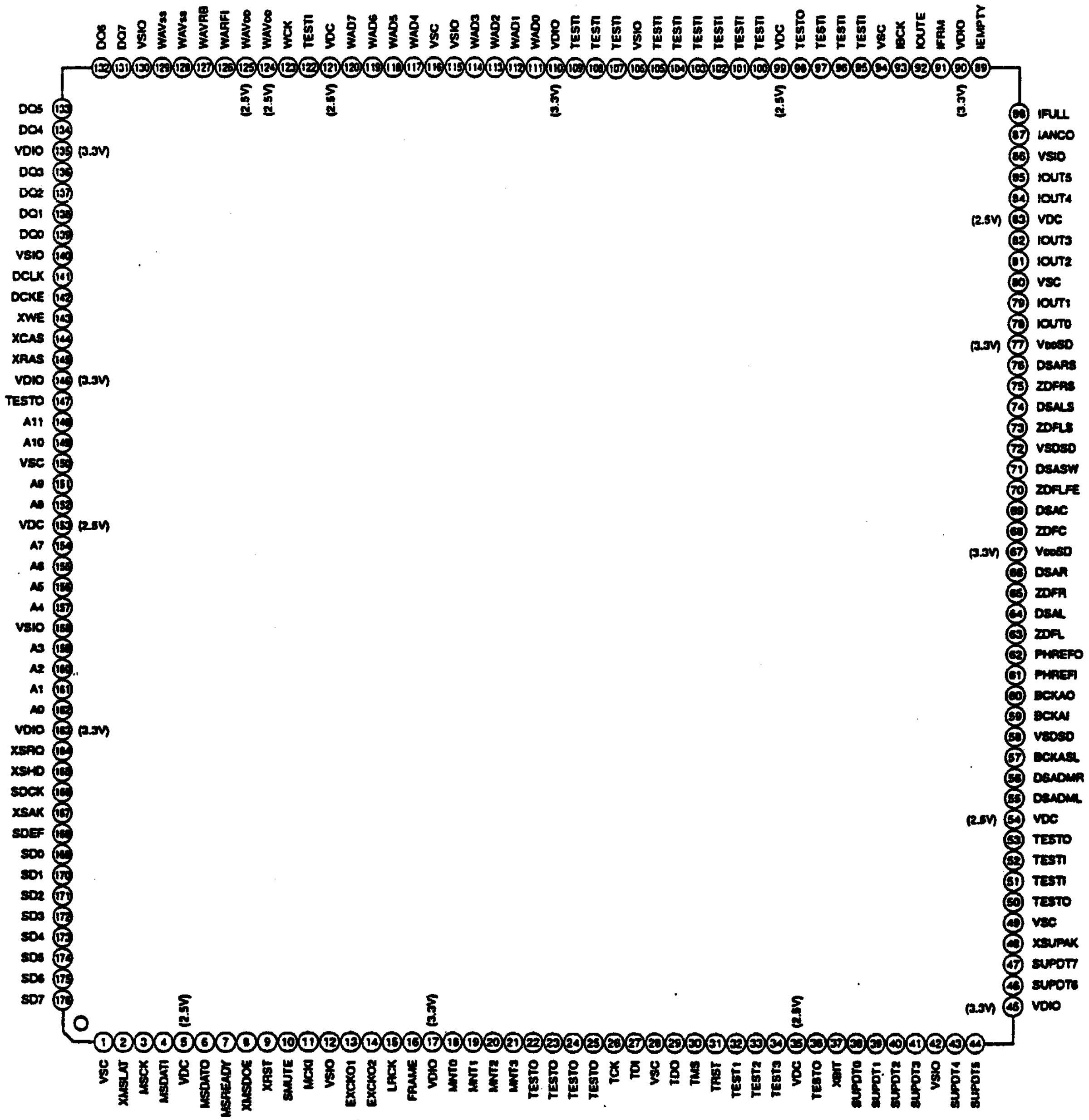
8 pin is clamp, and the Y signal input, 11, 14, 16 pin input a R, G, B signal into PAL (in the baseband input) with pedestal clamp.

It prohibit mute of 5 pin when It do Y/C-MIX in PAL (in the baseband input).

■ CXD2753R (SACDB ASSY : IC901)

- **SACD Decorder**

● Pin Arrangement


132 DQ6
131 DQ7
130 VSIO
129 WAVss
128 WAVss
127 WAVRB
126 WARFI
125 WAVDD (2.5V)
124 WAVDD (2.5V)
123 WCK
122 TESTI
121 VDC (2.5V)
120 WAD7
119 WAD6
118 WAD5
117 WAD4
116 VSC
115 VSIO
114 WAD3
113 WAD2
112 WAD1
111 WAD0
110 VDIO (3.3V)
109 TESTI
108 TESTI
107 TESTI
106 VSIO
105 TESTI
104 TESTI
103 TESTI
102 TESTI
101 TESTI
100 TESTI
99 VDC (2.5V)
98 TESTO
97 TESTI
96 TESTI
95 TESTI
94 VSC
93 IBCK
92 IOUTE
91 IFRM
90 VDIO (3.3V)
89 IEMPTY
133 DQ5
134 DQ4
135 VDIO (3.3V)
136 DQ3
137 DQ2
138 DQ1
139 DQ0
140 VSIO
141 DCLK
142 DCKE
143 XWE
144 XCAS
145 XRAS
146 VDIO (3.3V)
147 TESTO
148 A11
149 A10
150 VSC
151 A9
152 A8
153 VDC (2.5V)
154 A7
155 A6
156 A5
157 A4
158 VSIO
159 A3
160 A2
161 A1
162 A0
163 VDIO (3.3V)
164 XSRQ
165 XSHD
166 SDCK
167 XSAK
168 SDEF
169 SD0
170 SD1
171 SD2
172 SD3
173 SD4
174 SD5
175 SD6
176 SD7
88 IFULL
87 IANCO
86 VSIO
85 IOUT5
84 IOUT4
(2.5V) 83 VDC
82 IOUT3
81 IOUT2
80 VSC
79 IOUT1
78 IOUT0
(3.3V) 77 VDDSD
76 DSARS
75 ZDFRS
74 DSALS
73 ZDFLS
72 VSDSD
71 DSASW
70 ZDFLFE
69 DSAC
68 ZDFC
(3.3V) 67 VDDSD
66 DSAR
65 ZDFR
64 DSAL
63 ZDFL
62 PHREFO
61 PHREFI
60 BCKAO
59 BCKAI
58 VSDSD
57 BCKASL
56 DSADMR
55 DSADML
(2.5V) 54 VDC
53 TESTO
52 TESTI
51 TESTI
50 TESTO
49 VSC
48 XSUPAK
47 SUPDT7
46 SUPDT6
(3.3V) 45 VDIO
1 VSC
2 XMSLAT
3 MSCK
4 MSDATI
5 VDC (2.5V)
6 MSDATO
7 MSREADY
8 XMSDOE
9 XRST
10 SMUTE
11 MCKI
12 VSIO
13 EXCKO1
14 EXCKO2
15 LRCK
16 FRAME
17 VDIO (3.3V)
18 MINT0
19 MINT1
20 MINT2
21 MINT3
22 TESTO
23 TESTO
24 TESTO
25 TESTO
26 TCK
27 TDI
28 VSC
29 TDO
30 TMS
31 TRST
32 TEST1
33 TEST2
34 TEST3
35 VDC (2.5V)
36 TESTO
37 XBIT
38 SUPDT0
39 SUPDT1
40 SUPDT2
41 SUPDT3
42 VSIO
43 SUPDT4
44 SUPDT5

Pin Function

No.	Pin Name	I/O	Pin Function
1	VSC	-	Ground terminal for core
2	XMSLAT	I	Latched input terminal for microcomputer serial communication
3	MSCK		Shift clock input terminal for microcomputer serial communication
4	MSDAI		Data entry terminal for microcomputer serial communication
5	VDC	-	Power supply terminal for core
6	MSDATO	O	Data output terminal for microcomputer serial communication
7	MSREADY		Output preparation completion flag for microcomputer serial communication
8	XMSDOE		Output enable terminal for microcomputer serial communication
9	XRST	I	Reset terminal resets the whole IC with "L".
10	SMUTE	Ipd	Software mute removes audio out with "L" with "H" a soft mute terminal.
11	MCKI	I	Master clock input terminal
12	VSIO	-	Ground terminal for I/O
13	EXCKO1	O	Outside output clock terminal 1
14	EXCKO2		Outside output clock terminal 2
15	LRCK		1Fs (44.1kHz) clock output terminal
16	FRAME		Frame signal output terminal
17	VDIO	-	Power supply terminal for I/O
18	MNT0	O	Monitor output terminal
19	MNT1		
20	MNT2		
21	MNT3		
22	TESTO		Output terminal for test
23			
24			
25			
26	TCK	I	It is fixation in "L" a clock input terminal for test.
27	TDI	Ipu	Input terminal for test
28	VSC	-	Ground terminal for core
29	TDO	O	Output terminal for test
30	TMS	Ipu	Input terminal for test
31	TRST		Reset terminal for test
32	TEST1	I	It is fixation in "L" a clock input terminal for test.
33	TEST2		
34	TEST3		
35	VDC	-	Power supply terminal for core
36	TESTO	O	Output terminal for test
37	XBIT		DST connection monitor terminal
38	SUPDT0		Supplementary data output terminal (LSB)
39	SUPDT1		Supplementary data output terminal
40	SUPDT2		
41	SUPDT3		
42	VSIO	-	Ground terminal for I/O
43	SUPDT4	O	Supplementary data output terminal
44	SUPDT5		
45	VDIO	-	Power supply terminal for I/O
46	SUPDT6	O	Supplementary data output terminal
47	SUPDT7		Supplementary data output terminal (MSB)
48	XSUPAK		Supplementary data output terminal
49	VSC	-	Ground terminal for core
50	TESTO	O	Output terminal for test

No.	Pin Name	I/O	Pin Function
51	TESTI	I	It is fixation in "L" a test input terminal.
52			
53	TESTO	O	Output terminal for test
54	VDC	-	Power supply terminal for core
55	DSADML	O	DSD data output terminal for Lch Down Mix
56	DSADMR		DSD data output terminal for Rch Down Mix
57	BCKASL	I	Input and output choice terminal of a 1 bit clock for DSD data output.L= input (slave), H = output (master).
58	VSDSD	-	Ground terminal for DSD data output
59	BCKAI	I	Bit clock input terminal for DSD data output
60	BCKAO	O	Bit clock output terminal for DSD data output
61	PHREFI	I	Phase reference signal input terminal for DSD output phase modulation
62	PHREFO	O	Phase reference signal output terminal for DSD output phase modulation
63	ZDFL		Zero Lch data search flag
64	DSAL		DSD data output terminal for Lch loud speaker
65	ZDFR		Zero Rch data search flag
66	DSAR		DSD data output terminal for Rch loud speaker
67	VDDSD	-	Power supply Mizuko for DSD data output
68	ZDFC	O	Zero Cch data search flag
69	DSAC		DSD data output terminal for Cch loud speaker
70	ZDFLFE		Zero LFEch data search flag
71	DSASW		DSD data output terminal for SWch loud speaker
72	VSDSD	-	Ground terminal for DSD data output
73	ZDFLS	O	Zero LSch data search flag
74	DSALS		DSD data output terminal child for LSch loud speaker
75	ZDFRS		Zero RSch data search flag
76	DSARS		DSD data output terminal for RSch loud speaker
77	VDDSD	-	Power supply Mizuko for DSD data output
78	IOUT0	O	Data output terminal 0 for IEEE1394 link tip I/F
79	IOUT1		Data output terminal 1 for IEEE1394 link tip I/F
80	VSC	-	Ground terminal for core
81	IOUT2	O	Data output terminal 2 for IEEE1394 link tip I/F
82	IOUT3		Data output terminal 3 for IEEE1394 link tip I/F
83	VDC	-	Power supply terminal for co
84	IOUT4	O	Data output terminal 4 for IEEE1394 link tip I/F
85	IOUT5		Data output terminal 5 for IEEE1394 link tip I/F
86	VSIO	-	Ground terminal for I/O
87	IANCO	O	Transmission information data output terminal for IEEE1394 link tip I/F
88	IFULL	I	Data transmission hold demand signal input terminal for IEEE1394 link tip I/F
89	IEMPTY		High speed transmission demand signal input terminal for IEEE1394 link tip I/F
90	VDIO	-	Power supply terminal for I/O
91	IFRM	O	Frame reference signal output Mizuko for IEEE1394 link tip I/F
92	IOUTE		Enable signal output terminal for IEEE1394 link tip I/F
93	IBCK		Data transmission clock output terminal for IEEE1394 link tip I/F
94	VSC	-	Ground terminal for core
95	TESTI	I	It is fixation in "H" a test input terminal.
96			It is fixation in "L" a test input terminal.
97		Ipu	It is fixation in "H" a test input terminal.
98	TESTO	O	Output terminal for test
99	VDC	-	Power supply terminal for co
100	TESTI	I	It is fixation in "L" a test input terminal.

No.	Pin Name	I/O	Pin Function
101	TESTI	I	It is fixation in "L" a test input terminal.
102			
103			
104			
105			
106	VSIO	-	Ground terminal for I/O
107	TESTI	I	It is fixation in "L" a test input terminal.
108			
109			
110	VDIO	-	Power supply terminal for I/O
111	WAD0	I	Outside A/D data entry terminal for PSP Physical Disc Mark search (LSB)
112	WAD1		Outside A/D data entry terminal for PSP Physical Disc Mark search
113	WAD2		
114	WAD3		
115	VSIO	-	Ground terminal for I/O
116	VSC	-	Ground terminal for core
117	WAD4	I	Outside A/D data entry terminal for PSP Physical Disc Mark search
118	WAD5		
119	WAD6		
120	WAD7		Outside A/D data entry terminal for PSP Physical Disc Mark search (MSB)
121	VDC	-	Power supply terminal for core
122	TESTI	I	It is fixation in "L" a test input terminal.
123	WCK		Movement clock for PSP Physical Disc Mark search
124	WAVDD	-	A/D power supply terminal for PSP Physical Disc Mark search
125			
126	WARFI	Ai	Analog RF signal input terminal for PSP Physical Disc Mark search
127	WAVRB		A/D bottom reference terminal for PSP Physical Disc Mark search
128	WAVSS	-	A/D ground terminal for PSP Physical Disc Mark search
129			
130	VSIO	-	Ground terminal for I/O
131	DQ7	I/O	SDRAM data input-output terminal (MSB)
132	DQ6		SDRAM data input-output terminal
133	DQ5		
134	DQ4		
135	VDIO	-	Power supply terminal for I/O
136	DQ3	I/O	SDRAM data input-output terminal
137	DQ2		
138	DQ1		
139	DQ0		SDRAM data input-output terminal (LSB)
140	VSIO	-	Ground terminal for I/O
141	DCLK	O	Clock output terminal for SDRAM
142	DCKE		Clock enable output terminal for SDRAM
143	XWE		Wright enable output terminal for SDRAM
144	XCAS		Column address strobe output terminal for SDRAM
145	XRAS		Row address strobe output terminal for SDRAM
146	VDIO	-	Power supply terminal for I/O
147	TESTO	O	Output terminal for test
148	A11		Address output terminal for SDRAM (MSB)
149	A10		Address output terminal for SDRAM
150	VSC	-	Ground terminal for core

No.	Pin Name	I/O	Pin Function
151	A9	O	Address output terminal for SDRAM
152	A8		
153	VDC	-	Power supply terminal for core
154	A7	O	Address output terminal for SDRAM
155	A6		
156	A5		
157	A4		
158	VSIO	-	Ground terminal for I/O
159	A3	O	Address output terminal for SDRAM
160	A2		
161	A1		
162	A0		Address output terminal for SDRAM (LSB)
163	VDIO	-	Power supply terminal for I/O
164	XSRQ	O	Data request output terminal to input into a front end processor
165	XSHD	I	Input terminal of a header flag output by a front end processor
166	SDCK		Input terminal of a data carrier clock output by a front end processor
167	XSAK		Input terminal of data partial response flag output by a front end processor
168	SDEF		Input terminal of error flag output by a front end processor
169	SD0		The stream data input terminal which is output by a front end processor (LSB)
170	SD1		The stream data input terminal which is output by a front end processor
171	SD2		
172	SD3		
173	SD4		
174	SD5		
175	SD6		
176	SD7		The stream data input terminal which is output by a front end processor (MSB)

Ipu : Pull-up input, Ipd : Pull-down input, Ai : Analog input

PE5314B (FLKY ASSY : IC101)

- **FL Controller**

Pin Function

No.	Signal name	Dir.	Pin Functions
1	VDD1	–	Positive Power Supply (3.3 V)
2	VSS1	–	Ground Potential
3	X1	IN	Crystal Connection for Main System Clock Oscillation
4	X2	–	
5	IC	–	Internally Connected (Directly connect to VSS1)
6	RESET	IN	Reset Input
7	SCK1	IN	Serial Clock Input of Serial Interface
8	SI1	IN	Serial Data Input of Serial Interface
9	SO1	OUT	Serial Data Output of Serial Interface
10	XRDY	OUT	Hand-shake (Ready) Output of Serial Interface
11	POWER ON	OUT	Power Control Output
12	RESET OUT	OUT	System Reset Output
13	RESERVE OUT	OUT	Reserved (NC on this model)
14	LED8	OUT	LED Port 8 (NC on this model)
15	HALT	IN	Halt Port "NC" : Use Halt Mode
16	ACK	IN	Hand-shake (Acknowledge) Input of Serial Interface (Interrupt)
17	SEL IR	IN	Remote Control Input (Timer input of 8-bit remote control timer)
18	AVSS	–	Ground Potential for A/D Converter
19	MS1	IN	Destination (of player) Select (Analog Input for A/D Converter)
20	NC	–	NC
21	KEY1	IN	Key Input 1 (Analog input for A/D converter)
22	KEY0	IN	Key Input 0 (Analog input for A/D converter)
23	VSS0	–	Ground Potential to Ports
24	AVDD	–	Analog Power/Reference Voltage Input to A/D Converter (3.3 V)
25	VDD0	–	Positive Power Supply to Ports (3.3 V)
26	MS0_2	IN	Model (of player) Select (Set with a combinaition of this 3 ports)
27	MS0_1		
28	MS0_0		
29	LED7	OUT	LED Port 7
30	LED(STAND BY)	OUT	Stand By LED Port
31	PWSW	IN	Primary Switch State Input "H" : ON "L" : OFF
32	TES	IN	"H" : No System Reset mode "L" : General mode
33	OEM	IN	"H" : OEM Model "L" : Pioneer Model
34	MIC IN	IN	Detection of Microphone "H" : Microphone connected
35	CHECKER	IN	"H" : Checker Mode "L" : General mode
36	ON POWER	IN	"H" : Primary Power Switch Model "L" : Secondary Power Switch Model
37	FL SET2	IN	FL-Controller Mode Select FL SET1 / 2 = "H" / "H" : Other model FL SET1 / 2 = "H" / "L" : Other model FL SET1 / 2 = "L" / "H" : Other model FL SET1 / 2 = "L" / "L" : DV-555, 656A, 757Ai (This model)
38	FL SET1		
39	TEST2	OUT	Test Port
40	LED6	OUT	LED Port 6

No.	Signal name	Dir.	Pin Function
41	LED5	OUT	LED Port 5
42	LED4		LED Port 4
43	LED3		LED Port 3 (NC on this model)
44	LED2		LED Port 2 (NC on this model)
45	LED1		LED Port 1 (NC on this model)
46	LED0		LED Port 0 (NC on this model)
47	TEST1	OUT	Test Port
48	NC	–	NC
49	1394RST	OUT	1394 Host Controller Reset Output
50	NC	–	NC
51	P16	OUT	FIP Segment 16 Output
52	P15	OUT	FIP Segment 15 Output
53	NC	–	NC
54	P14	OUT	FIP Segment 14 Output
55	P13		FIP Segment 13 Output
56	P12		FIP Segment 12 Output
57	P11		FIP Segment 11 Output
58	P10		FIP Segment 10 Output
59	VDD2	–	Positive Power Supply to FIP Controller/Driver (3.3 V)
60	VLOAD	–	Pull-down Resistor Connection of FIP Controller/Driver (-28V)
61	P9	OUT	FIP Segment 9 Output
62	P8		FIP Segment 8 Output
63	P7		FIP Segment 7 Output
64	P6		FIP Segment 6 Output
65	P5		FIP Segment 5 Output
66	P4		FIP Segment 4 Output
67	P3		FIP Segment 3 Output
68	P2		FIP Segment 2 Output
69	P1		FIP Segment 1 Output
70	G11	OUT	FIP Grid 11 Output
71	G10		FIP Grid 10 Output
72	G9		FIP Grid 9 Output
73	G8		FIP Grid 8 Output
74	G7		FIP Grid 7 Output
75	G6		FIP Grid 6 Output
76	G5		FIP Grid 5 Output
77	G4		FIP Grid 4 Output
78	G3		FIP Grid 3 Output
79	G2		FIP Grid 2 Output
80	G1		FIP Grid 1 Output

■ PE5286A (DVDM ASSY : IC701)

- **DVD Data Processor**

● Pin Function

No.	Pin name	Dir.	Pin Functions
3, 40, 50, 54, 84, 103, 107, 145, 154, 158, 207	VDD3.3	–	It is a power supply of digital circuit. Be connected to +3.3V.
15, 18, 27, 53, 64, 74, 78, 92, 104, 130, 157, 164, 183, 191, 208	VDD2.5	–	It is a power supply of digital circuit. Be connected to +2.5V.
1, 2, 16, 17, 26, 41, 51, 52, 63, 73, 79, 85, 91, 105, 106, 131, 144, 150, 155, 156, 178, 182, 190	GND	–	It is a ground of digital circuit.
167, 171, 175	NC	–	It is a non-use pin. Fix it in GND or VDD.
165 166	AVDD	–	It is a power supply supply terminal for built-in analog-to-digital converter. Supply +2.5V (analog).
176 177	AGND	–	It is a GND terminal for built-in D/A converter.
6	BUNRI	IN	It is a separation test control terminal of inside RAM. Input LOW in use usually.
90	TMC1	IN	It is a test terminal. Input LOW in use usually.
148	TMC2	IN	
4	DMCK/RF_A	IN	It is the system clock input of DVD/CD-ROM decoder. Input 10-54MHz.
189	CKCD	IN	It is master clock of an audio system I/F block. In audio out of a CD, input 16.9MHz of reference clock.
5	DMACKI/PD4	IN	Fix unused time (unused usually) in GND or VDD.
149	VCOCLK	IN	With system clock of spindle demodulator, it is connected to VCO of outside charge account.
161	XRESET	IN	By the input of a LOW level, It initialize the whole large scale integrated circuit system.
135	SA19	I/O	Connect address bus of central processing unit.
134	SA18		
133	SA17		
132	SA16		
129	SA15		
128	SA14		
127	SA13		
126	SA12		
125	SA11		
124	SA10		
123	SA9		

No.	Pin name	Dir.	Pin Functions
122	SA8	IN	Connect address bus of central processing unit.
121	SA7		
120	SA6		
119	SA5		
118	SA4		
117	SA3		
116	SA2		
115	SA1		
114	SA0		
99	SAD7	I/O	Connect a data bus of central processing unit.
100	SAD6		
101	SAD5		
102	SAD4		
108	SAD3		
109	SAD2		
110	SAD1		
111	SAD0		
97	XSRD	IN	Be connected to a RD signal of central processing unit.
98	XSWR	IN	Be connected to a WR signal of central processing unit.
96	XSCL1	IN	It is chip select signal from central processing unit. XSRD/XSWR becomes effective at the time of LOW this signal.
95	XSWAIT	OUT	It is the WAIT output for central processing unit. This terminal must leave access from central processing unit at the time of LOW.
94	XSDREQ	OUT	It is a DMA demand for central processing unit. LOW level hip of this terminal falls down and activates DMA transfer with an edge.
93	SDACK	IN	It is DMA answer back. Data are output with HIGH this signal by SAD (7:0).
112	XIRQ10	OUT	It demand interrupt for central processing unit with LOW. Both terminals can set it with a register whether they output it.
113	XIRQ11		
141	FGPL/PE3	IN	Input a turn pulse from spindle motor.
147	FPWM	OUT	It is 7bitPWM output terminal for FG servo. It is the 3 value output of HIGH,LOW, high impedance.
146	VPWM	OUT	It is 5bitPWM output terminal for speed servo. It is the 3 value output of HIGH,LOW, high impedance.
143	PPWM	OUT	It is pulse width modulation output terminal for phase servo. It is the 3 value output of HIGH,LOW, high impedance.
142	RERR	OUT	It is control output for rough servo. It is the 3 value output of HIGH,LOW, high impedance.
31	PA7	I/O	It is general-purpose I/O port. By setting of a $70 register, You can select a function. CDDO inputs a digital out signal from a CD decoder. DIFOUT is digital audio output terminal based on IEC958. BCA is terminal to input a BCA code into. RWDIN is terminal to input a WOBBLE signal into. BCA/RWDIN terminal becomes necessary with RW revitalization machines.
32	PA6		
33	PA5		
34	PA4		
35	CDDO/PA3		
36	DIFOUT		
196	BCA/PA1		
195	RWDIN/PA0		

No.	Pin name	Dir.	Pin Functions
138	PD7/STATUS2	OUT	It output a various monitor signal (STATUS (2:0)). By setting of a $ 70 register, You can use it as a general-purpose I/O port port.
139	PD6/STATUS1		
140	PD5/STATUS0		
151	DUTY50	OUT	It always output a pulse of duty 50%. It give reference voltage of a various PWD signal of the recovery system.
160	ASC	OUT	It output frequency error of a sink period as a PWD pulse.
153	APC	OUT	It output a phase error of phase locked loop as a PWD pulse.
159	ATC	OUT	It output a direct current error of a RF signal as a PWD pulse.
152	AFC	OUT	It output VC OCL k and frequency error of reference clock as a PWD pulse. It is the 3 value output of HIGH,LOW, high impedance.
163	DEFECT/PE1	IN	It is the diffect signal input from the outside. Then a phase error of phase locked loop outputs this terminal in HIGH (APC), and it is done front value hold.
162	T_DET/PC7	OUT	It output a tangential-tilt search result as a pulse width modulation pulse.
70	DA13	OUT	It is address signal of DRAM for a VBR buffer.
71	DA12		
72	DA11		
75	DA10		
76	DA9		
77	DA8		
80	DA7		
81	DA6		
82	DA5		
83	DA4		
86	DA3		
87	DA2		
88	DA1		
89	DA0		
39	DD15	I/O	It is a data bus of DRAM for a VBR buffer.
42	DD14		
43	DD13		
44	DD12		
45	DD11		
46	DD10		
47	DD9		
48	DD8		
49	DD7		
55	DD6		
56	DD5		
57	DD4		
58	DD3		
59	DD2		
60	DD1		
61	DD0		

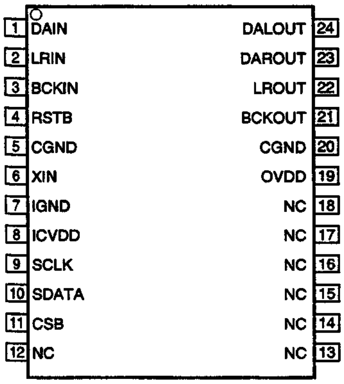
No.	Pin name	Dir.	Pin Functions
69	XDRAS	OUT	It is a RAS signal of DRAM of a VBR buffer.
67	XDCAS/XDCASL	OUT	It is a CAS signal of DRAM of a VBR buffer.
66	XDOE/DQML	OUT	It is an OE signal of DRAM of a VBR buffer.
65	XDWE	OUT	It is a WE signal of DRAM of a VBR buffer.
13	SDATA7	OUT	It is a data output bus of a VIDEO_DMA channel. Be connected to MPEG decoder.
14	SDATA6		
19	SDATA5		
20	SDATA4		
21	SDATA3		
22	SDATA2		
23	SDATA1		
24	SDATA0		
29	SREQ	IN	It is a data transfer demand terminal of a VIDEO_DMA channel. Be connected to MPEG decoder. You can change polarity by setting.
25	XSACK/PC5	OUT	It is a transfer reply terminal of a VIDEO_DMA channel. Be connected to MPEG decoder. Output form varies with setting.
28	XWR	OUT	It is a transfer reply terminal of a VIDEO_DMA channel. Be connected to MPEG decoder. Output form varies with setting.
30	XAVTRM/PC6	OUT	It is a signal to show the top of a sector of transfer data of a VIDEO_DMA channel in.
7	DSPA0/PC0	OUT	When it connects Motorola Digital Signal Processor as destination of an AUDIO_DMA channel, it is the signal which gives a DMA address to Motorola Digital Signal Processor.
8	DSPA1/PC1		
9	DSPA2/PC2		
206	ASDATA0/PB0	I/O	It is general-purpose I/O port. By setting of a $70 register, It become a data output bus of an AUDIO_DMA channel besides a port.
205	ASDATA1/PB1		
204	ASDATA2/PB2		
203	ASDATA3/PB3		
202	ASDATA4/PB4		
201	ASDATA5/PB5		
200	ASDATA6/PB6		
199	ASDATA7/PB7		
10	XAWR	OUT	It is a transfer reply terminal of an AUDIO_DMA channel. Output form varies with setting.
11	XASACK	OUT	It is a transfer reply terminal of an AUDIO_DMA channel. Output form varies with setting.
12	ASREQ	IN	It is a transfer demand terminal of an AUDIO_DMA channel. You can change polarity by setting.
192	BCK	OUT	It is the bit clock output to DAC.
193	LRCK	OUT	It is the LRCK signal output to DAC.
194	ADATA0	OUT	It is the serial data output to DAC.
187	CDBCK	IN	It input a bit clock from a CD decoder. Prospective frequency is 2.1168MHz(48fs).
186	CDLR	IN	It input a LRCK signal from a CD decoder.
185	CDDT	IN	It input audio system data from a CD decoder.
181	WFCK	IN	It is frame clock signal of a CD.
180	SCOR	IN	It is input terminal of assistant code sink of a CD.

No.	Pin name	Dir.	Pin Functions
179	SBSO	IN	It is an assistant code data input terminal of a CD.
184	EXCK	OUT	It is a shift clock making timeliness to send data forth on a SBSO terminal.
188	C2FI/PE2	IN	It is input terminal of C2 error flag from a CD decoder.
136	FSX/STATUS4	I/O	It input a FSX signal from a CD decoder. FSX signal is 7.35Khz at normal speed with frame alignment signal of error correction of CIRC. By setting of a $7F register, It become the internal monitor output (STATUS 4).
137	EFLG/STATUS3	I/O	It input an EFLG signal from a CD decoder. An EFLG signal is a monitor signal of error correction processing movement of CIRC. By setting of a $7F register, It become the internal monitor output (STATUS 3).
172	AIN	IN	It is analog RF signal input terminal to built-in A/D converter.
168	VRT	IN	It is reference voltage input terminal of built-in A/D converter.
169	VRTS	OUT	Connect with VRT.
170	VRC	OUT	It is center voltage output terminal of built-in A/D converter.
174	VRB	IN	It is reference voltage input terminal of built-in A/D converter.
173	VRBS	OUT	Connect with VRB.
37	CKE/PD3	OUT	It is an Enable signal of SDCLK.
38	CSB/PD2	OUT	It is chip select signal of SDRAM.
62	SDCLK	OUT	It is a terminal outputting a movement clock of SDRAM.
68	XCASH/DOMH	OUT	When it uses DRAM of bus 16 wide bit, it is a CAS signal of high rank 8bit.
197	VREQEN/PD1	I/O	It is an Enable signal of Video-REQ.
198	AREQEN/PD0	I/O	It is an Enable signal of Audio-REQ.

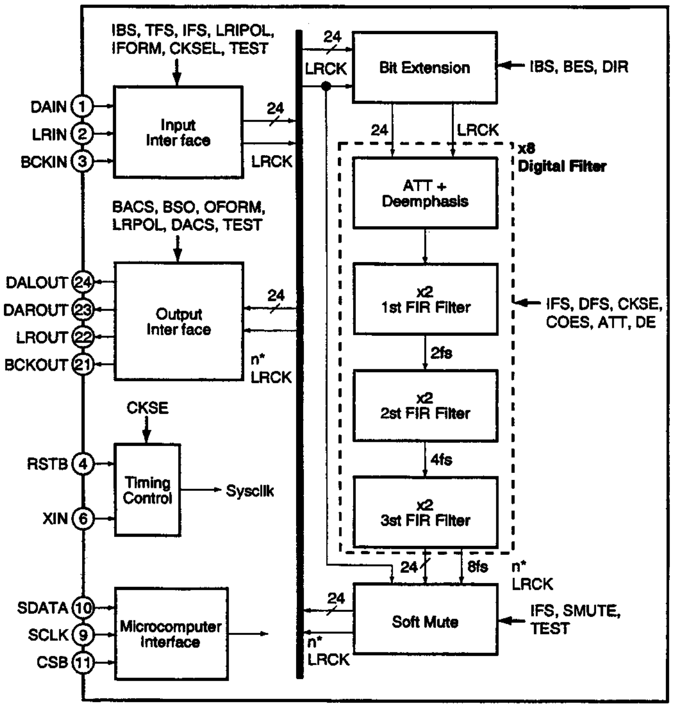
■ PD0274A (DVDM ASSY : IC552)

• Audio Quality Enhancer (AQE)

● Pin Arrangement


1 DAIN
2 LRIN
3 BCKIN
4 RSTB
5 CGND
6 XIN
7 IGND
8 ICVDD
9 SCLK
10 SDATA
11 CSB
12 NC
24 DALOUT
23 DAROUT
22 LROUT
21 BCKOUT
20 CGND
19 OVDD
18 NC
17 NC
16 NC
15 NC
14 NC
13 NC

● Block Diagram


IBS, TFS, IFS, LRIPOL, IFORM, CKSEL, TEST
DAIN 1
LRIN 2
BCKIN 3
Input Inter face
24
LRCK
BACS, BSO, OFORM, LRPOL, DACS, TEST
DALOUT 24
DAROUT 23
LROUT 22
BCKOUT 21
Output Inter face
24
n* LRCK
CKSE
RSTB 4
XIN 6
Timing Control
Sysclk
SDATA 10
SCLK 9
CSB 11
Microcomputer Interface
24
LRCK
Bit Extension
IBS, BES, DIR
24
LRCK
x8 Digital Filter
ATT + Deemphasis
x2 1st FIR Filter
IFS, DFS, CKSE, COES, ATT, DE
2fs
x2 2st FIR Filter
4fs
x2 3st FIR Filter
24
8fs
n* LRCK
24
Soft Mute
IFS, SMUTE, TEST
n* LRCK

Note :
"n" in the Block diagram expresses the rate to sample

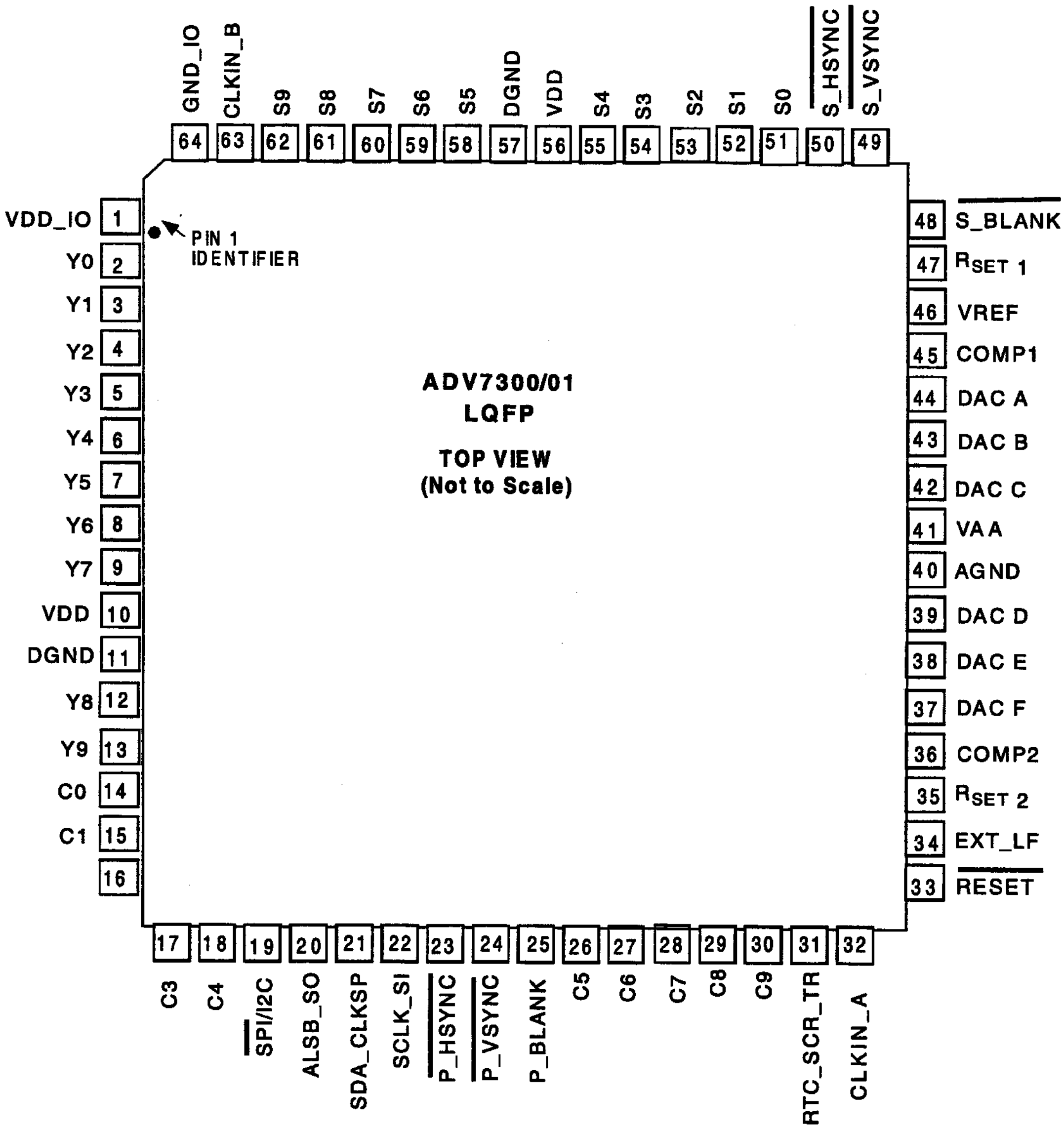
● Pin Function

No.	Name	I/O	Pin Function
1	DAIN	I	Audio data input
2	LRIN	I	L/R clock input
3	BCKIN	I	Bit clock input (48fs/64fs)
4	RSTB	I	System reset "0" = Reset
5	CGND	–	Ground (0V) for Core
6	XIN	I	System clock input (128fs/192fs/256fs/384fs/512fs/768fs)
7	IGND	–	Ground (0V) for Input Buffer
8	ICVDD	–	Power supply (3.3V) for Core and Input Buffer
9	SCLK	I	Microcomputer interface clock input
10	SDATA	I	Microcomputer interface data input
11	CSB	I	Microcomputer interface chip select input "0" = Enable, "1" = Disenable
12	NC	I	No connection
13	NC		
14	NC		
15	NC		
16	NC		
17	NC		
18	OVDD	–	Power supply (3.3V) for Output Buffer
19	OGND	–	Ground (0V) for Output Buffer
20	CGND	–	Ground (0V) for Core
21	BCKOUT	O	Bit clock output (48fs/64fs)
22	LROUT	O	L/R clock output. WCLK output at PCM1704.
23	DAROUT	O	R ch audio data output
24	DALOUT	O	L ch audio data output or L/R ch multiplex output

■ ADV7300AKST (DVDM ASSY : IC831)

- **Video Encoder IC**

● Pin Arrangement


ADV7300/01
LQFP
TOP VIEW
(Not to Scale)
PIN 1
IDENTIFIER
1 VDD_IO
2 Y0
3 Y1
4 Y2
5 Y3
6 Y4
7 Y5
8 Y6
9 Y7
10 VDD
11 DGND
12 Y8
13 Y9
14 C0
15 C1
16
17 C3
18 C4
19 SPI/I2C
20 ALSB_SO
21 SDA_CLKSP
22 SCLK_SI
23 P_HSYNC
24 P_VSYNC
25 P_BLANK
26 C5
27 C6
28 C7
29 C8
30 C9
31 RTC_SCR_TR
32 CLKIN_A
33 RESET
34 EXT_LF
35 RSET 2
36 COMP2
37 DAC F
38 DAC E
39 DAC D
40 AGND
41 VAA
42 DAC C
43 DAC B
44 DAC A
45 COMP1
46 VREF
47 RSET 1
48 S_BLANK
49 S_VSYNC
50 S_HSYNC
51 S0
52 S1
53 S2
54 S3
55 S4
56 VDD
57 DGND
58 S5
59 S6
60 S7
61 S8
62 S9
63 CLKIN_B
64 GND_IO

● Pin Function

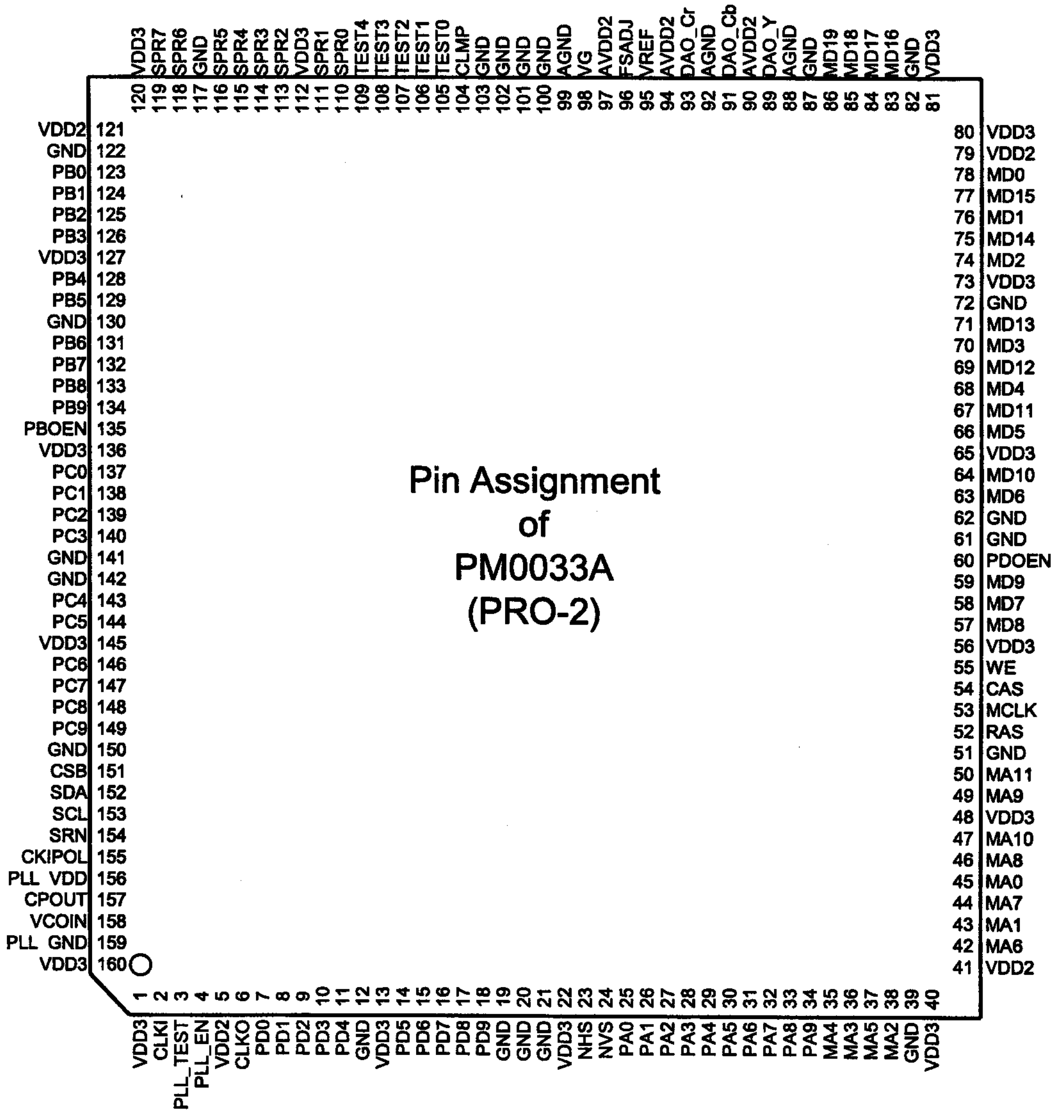
Pin Mnemonic	Input/Output	Function
DGND	G	Digital Ground
AGND	G	Analog Ground
GND_IO	G	Digital Ground
CLKIN_B	I	Pixel Clock Input. Requires a 27MHz reference clock for Progressive Scan Mode or a 74.25MHz (74.1758MHz) reference clock in HDTV mode. This clock input pin is only used in simultaneous SD and HD mode.
CLKIN_A	I	Pixel Clock Input for HD only or SD only modes.
COMP	O	Compensation Pin for DACs. Connect 0.1µF Capacitor from COMP pin to V_{AA}.
DAC A	O	CVBS/ GREEN/ Y SD analog output.
DAC B	O	Luma/ BLUE/ U SD analog output.
DAC C	O	Chroma/ RED/ V SD analog output.
DAC D	O	in SD only mode: CVBS/GREEN/ Y analog output in HD only mode and simultaneous HD/SD : Y/ GREEN (HD) analog output.
DAC E	O	in SD only mode: Luma/BLUE/ U analog output in HD only mode and simultaneous HD/SD : Pr/ RED (HD) analog output.
DAC F	O	in SD only mode: Chroma/RED/ V analog output in HD only mode and simultaneous HD/SD : Pb/ BLUE (HD) analog output.
P_BLANK	I	Video Blanking Control Signal for HD sync in simultaneous SD/HD mode and HD HD only mode.
$\overline{\text{P\_HSYNC}}$	I	Video Horizontal Sync Control Signal for HD sync in simultaneous SD/HD mode and HD only mode.
$\overline{\text{P\_VSYNC}}$	I	Video Vertical Sync Control Signal for HD sync in simultaneous SD/HD mode and HD only mode.
$\overline{\text{S\_BLANK}}$	I/O	Video Blanking Control Signal for SD.
$\overline{\text{S\_HSYNC}}$	I/O	Video Horizontal Control Signal for SD. Option to o/p SD HSYNC or HD HSYNC in SD Slave Mode 0 and/or any HD mode.
$\overline{\text{S\_VSYNC}}$	I/O	Video Blanking Control Signal for SD. Option to o/p SD VSYNC or SD HSYNC in SD Slave Mode 0 and/or any HD mode.
C9-0	I	10-Bit Progressive scan/ HDTV input port for CrCb color data in 4:2:2 input mode. In 4:4:4 input mode this input port is used for the Cb [Blue/U] data. The LSBs are set up on pins C0, C1. In default mode the input on this port is output on DAC E.
Y9-0	I	10-Bit Progressive scan/ HDTV input port for Y data. The LSBs are set up on pins Y0, Y1. In default mode the input on this port is output on DAC D.
S9-S0	I	10-Bit Standard Definition input port. Or Progressive Scan/ HDTV input port for Cr [Red/V] color data in 4:4:4 input mode. The LSBs are set up on pins S0, S1. In default mode the input on this port is output on DAC F.
$\overline{\text{RESET}}$	I	This input resets the on-chip timing generator and sets the ADV7300/01 into Default Register setting. Reset is an active low signal.

$R_{SET1,2}$	I	A 1520 Ohms resistor must be connected from this pin to AGND and is used to control the amplitudes of the DAC outputs.
SCL_SI	I	Multifunctional input: MPU Port Serial Interface Clock Input or SPI input.
SDA_CLKSP	I/O	Multifunctional pin: MPU Port Serial Data Input/Output or SPI clock input.
ALSB_SO	I/O	Multifunctional pin. TTL Address Input. This signal sets up the LSB of the MPU address. When this pin is tied low the I2C filter is activated which reduces noise on the I2C interface. When this pin is tied high, the input bandwidth on the I2C lines is increased. SPI output.
$\overline{\text{SPI}}$/I2C	I	When this nput pin is brought low, the ADV7300/01 interfaces over the SPI port and uses this input as part of the 4 wire SPI nterface. When this input pin is tied high [Vdd_IO], the ADV7300/01 interfaces over the I2C port.
V_{DD_IO}	P	Digital power supply
V_{DD}	P	Digital power supply
V_{AA}	P	Analog power supply
V_{REF}	I/O	Optional External Voltage Reference Input for DACs or Voltage Reference Output (1.235V).
EXT_LF	I	External Loop filter for the internal PLL.
RTC_SCR_TR	I	Multifunctional Input: Real Time Control (RTC) nput, Timing Reset nput, Subcarrier Reset nput.

PM0033A (DVDM ASSY : IC902)

- **Progressive Scan Converter (PRO2)**

● Pin Arrangement


Pin Assignment
of
PM0033A
(PRO-2)
1 VDD3
2 CLKI
3 PLL_TEST
4 PLL_EN
5 VDD2
6 CLKO
7 PD0
8 PD1
9 PD2
10 PD3
11 PD4
12 GND
13 VDD3
14 PD5
15 PD6
16 PD7
17 PD8
18 PD9
19 GND
20 GND
21 GND
22 VDD3
23 NHS
24 NVS
25 PA0
26 PA1
27 PA2
28 PA3
29 PA4
30 PA5
31 PA6
32 PA7
33 PA8
34 PA9
35 MA4
36 MA3
37 MA5
38 MA2
39 GND
40 VDD3
41 VDD2
42 MA6
43 MA1
44 MA7
45 MA0
46 MA8
47 MA10
48 VDD3
49 MA9
50 MA11
51 GND
52 RAS
53 MCLK
54 CAS
55 WE
56 VDD3
57 MD8
58 MD7
59 MD9
60 PDOEN
61 GND
62 GND
63 MD6
64 MD10
65 VDD3
66 MD5
67 MD11
68 MD4
69 MD12
70 MD3
71 MD13
72 GND
73 VDD3
74 MD2
75 MD14
76 MD1
77 MD15
78 MD0
79 VDD2
80 VDD3
81 VDD3
82 GND
83 MD16
84 MD17
85 MD18
86 MD19
87 GND
88 AGND
89 DAO_Y
90 AVDD2
91 DAO_Cb
92 AGND
93 DAO_Cr
94 AVDD2
95 VREF
96 FSADJ
97 AVDD2
98 VG
99 AGND
100 GND
101 GND
102 GND
103 GND
104 CLMP
105 TEST0
106 TEST1
107 TEST2
108 TEST3
109 TEST4
110 SPR0
111 SPR1
112 VDD3
113 SPR2
114 SPR3
115 SPR4
116 SPR5
117 GND
118 SPR6
119 SPR7
120 VDD3
121 VDD2
122 GND
123 PB0
124 PB1
125 PB2
126 PB3
127 VDD3
128 PB4
129 PB5
130 GND
131 PB6
132 PB7
133 PB8
134 PB9
135 PBOEN
136 VDD3
137 PC0
138 PC1
139 PC2
140 PC3
141 GND
142 GND
143 PC4
144 PC5
145 VDD3
146 PC6
147 PC7
148 PC8
149 PC9
150 GND
151 CSB
152 SDA
153 SCL
154 SRN
155 CKIPOL
156 PLL VDD
157 CPOUT
158 VCOIN
159 PLL GND
160 VDD3

● Pin Function

Pin No.	Name	I/O/ P	Attribute	Functional Description
1	VDD3	P	-	VDD for IO (3.3V)
2	CLKI	In	LVTTL	27MHz System clock input terminal
3	PLL_TEST	In	LVTTL	Test exclusive use input terminal
4	PLL_EN	In	LVTTL	PLL enable input terminal
5	VDD2	P	-	VDD for Core (2.5V)
6	CLKO	Out	2mA	27MHz Clock output terminal
7	PD0	Inout	LVTTL, leakage, 2mA	Image data I/O port D(LSB)
8	PD1	Inout	LVTTL, leakage, 2mA	Image data I/O port D
9	PD2	Inout	LVTTL, leakage, 2mA	Image data I/O port D
10	PD3	Inout	LVTTL, leakage, 2mA	Image data I/O port D
11	PD4	Inout	LVTTL, leakage, 2mA	Image data I/O port D
12	GND	P	-	Digital Ground
13	VDD3	P	-	VDD for IO (3.3V)
14	PD5	Inout	LVTTL, leakage, 2mA	Image data I/O port D
15	PD6	Inout	LVTTL, leakage, 2mA	Image data I/O port D
16	PD7	Inout	LVTTL, leakage, 2mA	Image data I/O port D
17	PD8	Inout	LVTTL, leakage, 2mA	Image data I/O port D
18	PD9	Inout	LVTTL, leakage, 2mA	Image data I/O port D(MSB)
19	GND	P	-	Digital Ground
20	GND	P	-	Digital Ground
21	GND	P	-	Digital Ground
22	VDD3	P	-	VDD for IO (3.3V)
23	NHS	In	Schmitt	Horizontal synchronization input terminal
24	NVS	In	Schmitt	Vertical synchronization input terminal
25	PA0	In	LVTTL	Image data I/O port A(LSB)
26	PA1	In	LVTTL	Image data I/O port A
27	PA2	In	LVTTL	Image data I/O port A
28	PA3	In	LVTTL	Image data I/O port A
29	PA4	In	LVTTL	Image data I/O port A
30	PA5	In	LVTTL	Image data I/O port A
31	PA6	In	LVTTL	Image data I/O port A
32	PA7	In	LVTTL	Image data I/O port A
33	PA8	In	LVTTL	Image data I/O port A
34	PA9	In	LVTTL	Image data I/O port A(MSB)
35	MA4	Out	2mA	SDRAM address output terminal
36	MA3	Out	2mA	SDRAM address output terminal
37	MA5	Out	2mA	SDRAM address output terminal
38	MA2	Out	2mA	SDRAM address output terminal
39	GND	P	-	Digital Ground
40	VDD3	P	-	VDD for IO (3.3V)

Pin No.	Name	I/O/ P	Attribute	Functional Description
41	VDD2	P	-	VDD for Core (2.5V)
42	MA6	Out	2mA	SDRAM address output terminal
43	MA1	Out	2mA	SDRAM address output terminal
44	MA7	Out	2mA	SDRAM address output terminal
45	MA0	Out	2mA	SDRAM address output terminal(LSB)
46	MA8	Out	2mA	SDRAM address output terminal
47	MA10	Out	2mA	SDRAM address output terminal
48	VDD3	P	-	VDD for IO (3.3V)
49	MA9	Out	2mA	SDRAM address output terminal
50	MA11	Out	2mA	SDRAM address output terminal(MSB)
51	GND	P	-	Digital Ground
52	RAS	Out	2mA	SDRAM Row Address Strobe Command output terminal
53	MCLK	Out	4mA	SDRAM Clock output terminal (54MHz)
54	CAS	Out	2mA	SDRAM Column Address Strobe Command output terminal
55	WE	Out	2mA	SDRAM Write Enable output terminal
56	VDD3	P	-	VDD for IO (3.3V)
57	MD8	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
58	MD7	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
59	MD9	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
60	PDOEN	In	LVTTL	Image port D input and output setting input terminal (L: input, H: output)
61	GND	P	-	Digital Ground
62	GND	P	-	Digital Ground
63	MD6	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
64	MD10	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
65	VDD3	P	-	VDD for IO (3.3V)
66	MD5	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
67	MD11	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
68	MD4	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
69	MD12	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
70	MD3	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
71	MD13	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
72	GND	P	-	Digital Ground
73	VDD3	P	-	VDD for IO (3.3V)
74	MD2	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
75	MD14	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
76	MD1	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
77	MD15	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
78	MD0	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal(LSB)
79	VDD2	P	-	VDD for Core (2.5V)
80	VDD3	P	-	VDD for IO (3.3V)
81	VDD3	P	-	VDD for IO (3.3V)
82	GND	P	-	Digital Ground
83	MD16	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal

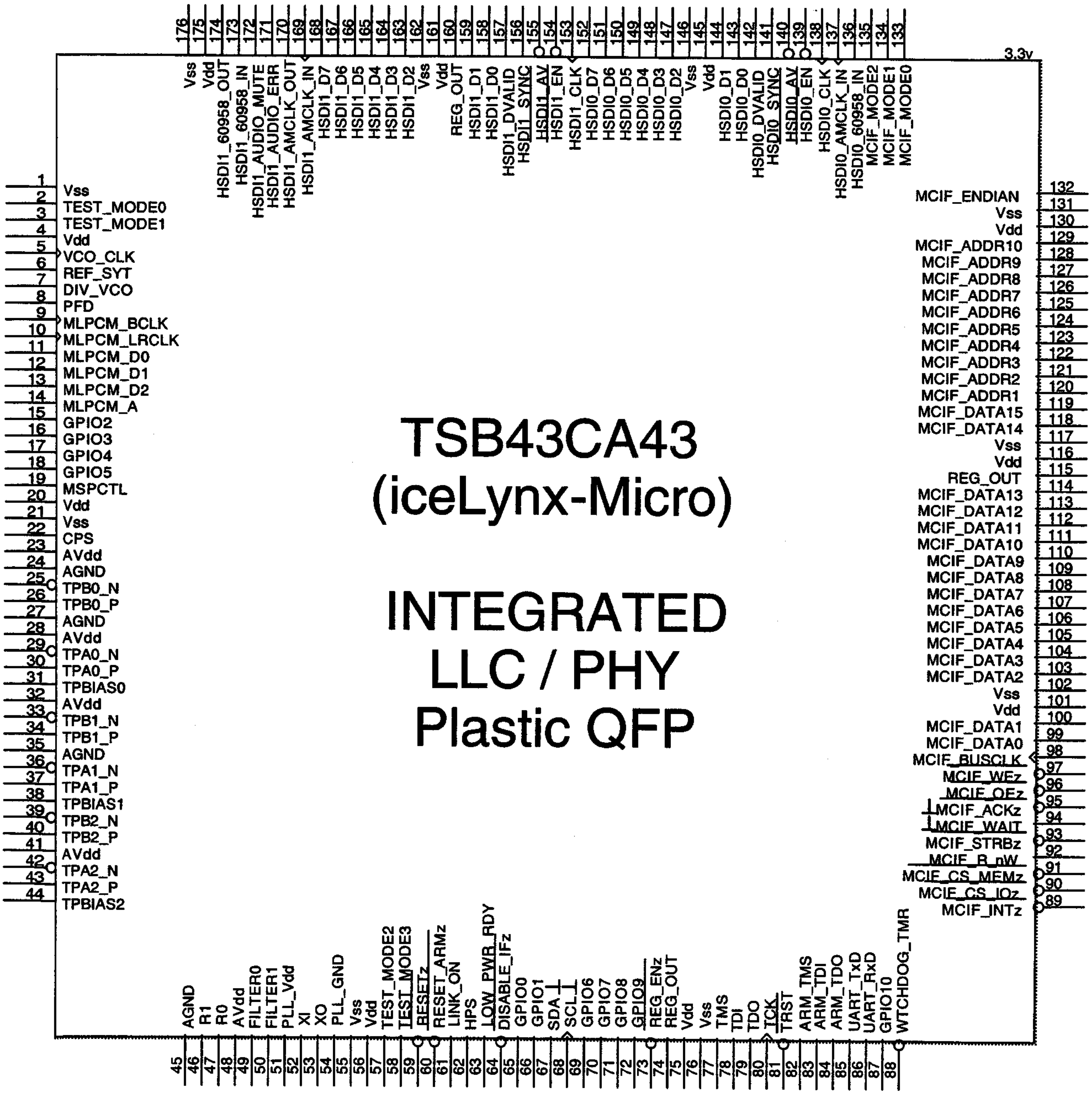
Pin No.	Name	I/O/ P	Attribute	Functional Description
84	MD17	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
85	MD18	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal
86	MD19	Inout	LVTTL, 2mA, Pullup	SDRAM data input-output terminal(MSB)
87	GND	P	-	Digital Ground
88	AGND	P	-	Ground for DAC
89	DAO_Y	Out	-	Analog video-out (Y)
90	AVDD2	P	-	VDD for DAC (2.5V)
91	DAO_Cb	Out	-	Analog video-out (Cb)
92	AGND	P	-	Ground for DAC
93	DAO_Cr	Out	-	Analog video-out (Cr)
94	AVDD2	P	-	VDD for DAC (2.5V)
95	VREF	In	-	DAC reference voltage input terminal
96	FSADJ	Inout	-	An ohms connection terminal for DAC peak swing setting
97	AVDD2	P	-	VDD for DAC (2.5V)
98	VG	Out	-	A volume connection terminal for gate voltage compensation of a DAC electric current cell
99	AGND	P	-	Ground for DAC
100	GND	P	-	Digital Ground
101	GND	P	-	Digital Ground
102	GND	P	-	Digital Ground
103	GND	P	-	Digital Ground
104	CLMP	Out	2mA	Clamp pulse output terminal
105	TEST0	In	LVTTL	Test exclusive use input terminal
106	TEST1	In	LVTTL	Test exclusive use input terminal
107	TEST2	In	LVTTL	Test exclusive use input terminal
108	TEST3	In	LVTTL	Test exclusive use input terminal
109	TEST4	In	LVTTL	Test exclusive use input terminal
110	SPR0	Out	2mA	Serial-to-parallel conversion output terminal(LSB)
111	SPR1	Out	2mA	Serial-to-parallel conversion output terminal
112	VDD3	P	-	VDD for IO (3.3V)
113	SPR2	Out	2mA	Serial-to-parallel conversion output terminal
114	SPR3	Out	2mA	Serial-to-parallel conversion output terminal
115	SPR4	Out	2mA	Serial-to-parallel conversion output terminal
116	SPR5	Out	2mA	Serial-to-parallel conversion output terminal
117	GND	P	-	Digital Ground
118	SPR6	Out	2mA	Serial-to-parallel conversion output terminal
119	SPR7	Out	2mA	Serial-to-parallel conversion output terminal(MSB)
120	VDD3	P	-	VDD for IO (3.3V)
121	VDD2	P	-	VDD for Core (2.5V)
122	GND	P	-	Digital Ground
123	PB0	Inout	LVTTL, leakage, 2mA	Image data I/O port B(LSB)
124	PB1	Inout	LVTTL, leakage, 2mA	Image data I/O port B
125	PB2	Inout	LVTTL, leakage, 2mA	Image data I/O port B
126	PB3	Inout	LVTTL, leakage, 2mA	Image data I/O port B
127	VDD3	P	-	VDD for IO (3.3V)
128	PB4	Inout	LVTTL, leakage, 2mA	Image data I/O port B

Pin No.	Name	I/O/ P	Attribute	Functional Description
129	PB5	Inout	LVTTL, leakage, 2mA	Image data I/O port B
130	GND	P	-	Digital Ground
131	PB6	Inout	LVTTL, leakage, 2mA	Image data I/O port B
132	PB7	Inout	LVTTL, leakage, 2mA	Image data I/O port B
133	PB8	Inout	LVTTL, leakage, 2mA	Image data I/O port B
134	PB9	Inout	LVTTL, leakage, 2mA	Image data I/O port B(MSB)
135	PBOEN	In	LVTTL	Image port B input and output setting input terminal (L: input, H: output)
136	VDD3	P	-	VDD for IO (3.3V)
137	PC0	Out	2mA	Image data I/O port C(LSB)
138	PC1	Out	2mA	Image data I/O port C
139	PC2	Out	2mA	Image data I/O port C
140	PC3	Out	2mA	Image data I/O port C
141	GND	P	-	Digital Ground
142	GND	P	-	Digital Ground
143	PC4	Out	2mA	Image data I/O port C
144	PC5	Out	2mA	Image data I/O port C
145	VDD3	P	-	VDD for IO (3.3V)
146	PC6	Out	2mA	Image data I/O port C
147	PC7	Out	2mA	Image data I/O port C
148	PC8	Out	2mA	Image data I/O port C
149	PC9	Out	2mA	Image data I/O port C(MSB)
150	GND	P	-	Digital Ground
151	CSB	In	Schmitt	MPU Interface chip select input terminal
152	SDA	In	Schmitt	MPU Interface data entry terminal
153	SCL	In	Schmitt	MPU Interface clock input terminal
154	SRN	In	Schmitt	System reset input terminal
155	CKIPOL	In	LVTTL	System clock polarity setting input terminal
156	PLL_VDD	P	-	VDD of PLL exclusive use (2.5V)
157	CPOUT	Out	Analog	Analog output terminal from PLL charge pump
158	VCOIN	In	Analog	Analog input terminal from PLL outside charge account loop filter
159	PLL_GND	P	-	Ground of PLL exclusive use
160	VDD3	P	-	VDD for IO (3.3V)

■ TSB43CA43GGW (ILKB ASSY : IC201)

• IEEE1394 PHY LINK

● Pin Arrangement


TSB43CA43
(iceLynx-Micro)
INTEGRATED
LLC / PHY
Plastic QFP
3.3v
1 Vss
2 TEST_MODE0
3 TEST_MODE1
4 Vdd
5 VCO_CLK
6 REF_SYT
7 DIV_VCO
8 PFD
9 MLPCM_BCLK
10 MLPCM_LRCLK
11 MLPCM_D0
12 MLPCM_D1
13 MLPCM_D2
14 MLPCM_A
15 GPIO2
16 GPIO3
17 GPIO4
18 GPIO5
19 MSPCTL
20 Vdd
21 Vss
22 CPS
23 AVdd
24 AGND
25 TPB0_N
26 TPB0_P
27 AGND
28 AVdd
29 TPA0_N
30 TPA0_P
31 TPBIAS0
32 AVdd
33 TPB1_N
34 TPB1_P
35 AGND
36 TPA1_N
37 TPA1_P
38 TPBIAS1
39 TPB2_N
40 TPB2_P
41 AVdd
42 TPA2_N
43 TPA2_P
44 TPBIAS2
45 AGND
46 R1
47 R0
48 AVdd
49 FILTER0
50 FILTER1
51 PLL_Vdd
52 XI
53 XO
54 PLL_GND
55 Vss
56 Vdd
57 TEST_MODE2
58 TEST_MODE3
59 RESETz
60 RESET_ARMz
61 LINK_ON
62 HPS
63 LOW_PWR_RDY
64 DISABLE_IFz
65 GPIO0
66 GPIO1
67 SDA
68 SCL
69 GPIO6
70 GPIO7
71 GPIO8
72 GPIO9
73 REG_ENz
74 REG_OUT
75 Vdd
76 Vss
77 TMS
78 TDI
79 TDO
80 TCK
81 TRST
82 ARM_TMS
83 ARM_TDI
84 ARM_TDO
85 UART_TxD
86 UART_RxD
87 GPIO10
88 WTCHDOG_TMR
89 MCIF_INTz
90 MCIF_CS_IOz
91 MCIF_CS_MEMz
92 MCIF_R_nW
93 MCIF_STRBz
94 MCIF_WAIT
95 MCIF_ACKz
96 MCIF_OEz
97 MCIF_WEz
98 MCIF_BUSCLK
99 MCIF_DATA0
100 MCIF_DATA1
101 Vdd
102 Vss
103 MCIF_DATA2
104 MCIF_DATA3
105 MCIF_DATA4
106 MCIF_DATA5
107 MCIF_DATA6
108 MCIF_DATA7
109 MCIF_DATA8
110 MCIF_DATA9
111 MCIF_DATA10
112 MCIF_DATA11
113 MCIF_DATA12
114 MCIF_DATA13
115 REG_OUT
116 Vdd
117 Vss
118 MCIF_DATA14
119 MCIF_DATA15
120 MCIF_ADDR1
121 MCIF_ADDR2
122 MCIF_ADDR3
123 MCIF_ADDR4
124 MCIF_ADDR5
125 MCIF_ADDR6
126 MCIF_ADDR7
127 MCIF_ADDR8
128 MCIF_ADDR9
129 MCIF_ADDR10
130 Vdd
131 Vss
132 MCIF_ENDIAN
133 MCIF_MODE0
134 MCIF_MODE1
135 MCIF_MODE2
136 HSDI0_60958_IN
137 HSDI0_AMCLK_IN
138 HSDI0_CLK
139 HSDI0_EN
140 HSDI0_AV
141 HSDI0_SYNC
142 HSDI0_DVALID
143 HSDI0_D0
144 HSDI0_D1
145 Vdd
146 Vss
147 HSDI0_D2
148 HSDI0_D3
149 HSDI0_D4
150 HSDI0_D5
151 HSDI0_D6
152 HSDI0_D7
153 HSDI1_CLK
154 HSDI1_EN
155 HSDI1_AV
156 HSDI1_SYNC
157 HSDI1_DVALID
158 HSDI1_D0
159 HSDI1_D1
160 REG_OUT
161 Vdd
162 Vss
163 HSDI1_D2
164 HSDI1_D3
165 HSDI1_D4
166 HSDI1_D5
167 HSDI1_D6
168 HSDI1_D7
169 HSDI1_AMCLK_IN
170 HSDI1_AMCLK_OUT
171 HSDI1_AUDIO_ERR
172 HSDI1_AUDIO_MUTE
173 HSDI1_60958_IN
174 HSDI1_60958_OUT
175 Vdd
176 Vss

- **Pin Function**

Pin Name	Pin No	I/O	Description
Power & Ground Pins			
DISABLE_IFZ	64	I	Interface Disable. When asserted, the interfaces are put into a Hi-Z state. Interfaces include: ex-CPU, HSDI, GPIO, and WTCH_DG_TMRZ.
HPS	62	I	Host Power Status. This indicates the power status of the external system to iceLynx-Micro. A rising edge indicates the system CPU has been turned ON. (The internal ARM should wake up.) A falling edge indicates the system CPU has been turned OFF. (The internal ARM decides if power down is necessary.)
LOW_PWR_RDY	63	O	Output to system to indicate iceLynx-Micro is ready to go into a low power state. The ARM and WTCH_DG_TMRZ control this pin.
WTCH_DG_TMRZ	88	O	Watch Dog Timer (for the ARM.) iceLynx-Micro hardware asserts this pin whenever ARM software has not updated the Timer2 register within the allowed time period.
RESET_ARMZ	60	I	ARM reset. This signal resets the internal ARM processor.
RESETZ	59	I/O	Device reset. This signal resets all logic. This includes the PHY, Link core, memory, the ARM, and random logic.
VSS	1, 21, 55, 76, 102 117 131, 146, 162 176		Digital Ground.
AGND	24, 27, 35, 45,		Analog Ground.
PLL_GND	54		PLL Ground.
VDD	4, 20, 56, 75, 101 116, 130 145, 161 175		Digital Power Supply. Must be set to 3.3V nominal.

Pin Name	Pin No	I/O	Description
AVDD	23, 28, 32, 41, 48		Analog Power Supply. Must be set to 3.3V nominal.
PLL_VDD	51		PLL Power Supply. Must be set to 3.3V nominal.
Regulator Pins			
REG_ENZ	73	I	Internal Regulator Enable. The iceLynx-Micro core voltage is 1.8V. Internal regulators are used to regulate the 3.3V VDD inputs to 1.8V. This pin enables the regulators.
REG_OUT0	74	O	1.8V Regulator Output. This pin should be connected to ground using a 0.1uF capacitor.
REG_OUT1	115	O	1.8V Regulator Output. This pin should be connected to ground using a 0.1uF capacitor.
REG_OUT2	160	O	1.8V Regulator Output. This pin should be connected to ground using a 0.1uF capacitor.
External CPU Interface Pins			
MCIF_ACKZ	95	I/O	MCIF Acknowledge pin. Default active low. iceLynx-Micro asserts this signal if it has completed the MCIF request. This signal is always driven. This signal is used for the following modes: • 68000 + Wait I/O Access • MPC850 I/O Access In Serial MCIF Mode, this pin is used for the Serial Read Acknowledge (SMCIF_RACKZ.)
MCIF_ADDR1	120	I	MCIF Address 1 pin. This data pin is the least significant bit of the MCIF Address Bus. MCIF_ADDR0 is internally grounded. Only 16-bit addressing is allowed. MCIF_ADDR1 should be connected to the Address1 signal of the system CPU.
MCIF_ADDR10	129	I	MCIF Address 10 pin. This data pin is the most significant bit of the MCIF Address Bus.
MCIF_ADDR2	121	I	MCIF Address 2 pin
MCIF_ADDR3	122	I	MCIF Address 3 pin
MCIF_ADDR4	123	I	MCIF Address 4 pin
MCIF_ADDR5	124	I	MCIF Address 5 pin
MCIF_ADDR6	125	I	MCIF Address 6 pin
MCIF_ADDR7	126	I	MCIF Address 7 pin
MCIF_ADDR8	127	I	MCIF Address 8 pin
MCIF_ADDR9	128	I	MCIF Address 9 pin

Pin Name	Pin No	I/O	Description
MCIF_BUSCLK	98	I	MCIF Bus Clock. This pin is only used for the MCIF synchronous mode. (MPC850 I/O Access) and the Memory Access. This signal should be tied high if not used. In Serial MCIF Mode, this pin is used for the Serial Write Clock (SMCIF_WCLK.)
MCIF_CS_IOZ	90	I	MCIF Chip Select for all I/O MCIF modes. In Serial MCIF Mode, this pin is used for the Serial Write Request (SMCIF_WREQZ.)
MCIF_CS_MEMZ	91	I/O	MCIF Chip Select for the Memory MCIF mode. In Serial MCIF Mode, this pin is used for the Serial Write Acknowledge (SMCIF_WACKZ.)
MCIF_DATA0	99	I/O	MCIF DATA 0 pin. This data pin is the least significant bit of the MCIF Data Bus. In Serial MCIF Mode, this pin is used for the Serial Read Data (SMCIF_RDATA.)
MCIF_DATA1	100	I/O	MCIF DATA 1 pin.
MCIF_DATA10	111	I/O	MCIF DATA 10 pin.
MCIF_DATA11	112	I/O	MCIF DATA 11 pin.
MCIF_DATA12	113	I/O	MCIF DATA 12 pin.
MCIF_DATA13	114	I/O	MCIF DATA 13 pin.
MCIF_DATA14	118	I/O	MCIF DATA 14 pin.
MCIF_DATA15	119	I/O	MCIF DATA 15 pin. This data pin is the most significant bit of the MCIF Data Bus.
MCIF_DATA2	103	I/O	MCIF DATA 2 pin.
MCIF_DATA3	104	I/O	MCIF DATA 3 pin.
MCIF_DATA4	105	I/O	MCIF DATA 4 pin.
MCIF_DATA5	106	I/O	MCIF DATA 5 pin.
MCIF_DATA6	107	I/O	MCIF DATA 6 pin.
MCIF_DATA7	108	I/O	MCIF DATA 7 pin.
MCIF_DATA8	109	I/O	MCIF DATA 8 pin.
MCIF_DATA9	110	I/O	MCIF DATA 9 pin.
MCIF_ENDIAN	132	I	MCIF Endian Pin. This sets the Endianess for accesses between the external CPU and the internal iceLynx-Micro memory. This pin sets Endianess for all MCIF modes and the Serial MCIF mode. When set to a logical 0, data is read/written to the ex-CPU exactly as it is stored in iceLynx-Micro memory. (Big Endian) When set to a logical 1, data is swapped on half-word and byte boundaries before it is read/written to the ex-CPU. (Little Endian)

Pin Name	**Pin No**	**I/O**	**Description**
MCIF_INTZ	89	O	MCIF Interrupt. This signal is push-pull. (always asserted) It does not require a pull-up resistor.
MCIF_MODE0	133	I	MCIF Mode 0. Used to select MCIF mode.
MCIF_MODE1	134	I	MCIF Mode 1. Used to select MCIF mode.
MCIF_MODE2	135	I	MCIF Mode 2. Used to select MCIF mode.
MCIF_OEZ	96	I	MCIF Output Enable. Default active low. This input pin indicates if the system CPU wants to perform a MCIF read access. This signal is used for the following modes: • SH-3 I/O Access • M16C/62 I/O Access • Memory Access This signal should be tied high if not used.
MCIF_RW	92	I	MCIF Read/Write pin. Default value for read is a logical 1. Default value for write is a logical 0. In Serial MCIF Mode, this pin is used for the Serial Write Data (SMCIF_WDATA.)
MCIF_STRBZ	93	I	MCIF Strobe pin. Default active low. This pin is used (along with MCIF_CS_IOZ) to validate the MCIF access. This signal is used for the following modes: • 68000 + Wait I/O Access • MPC850 I/O Access • When not used, this pin should be tied high. In Serial MCIF Mode, this pin is used for the Serial Read Clock (SMCIF_RCLK.)
MCIF_WAIT	94	O	MCIF Wait pin. Default active high. iceLynx-Micro asserts this signal if it is not ready to service an MCIF request. When not asserted, this signal is in high-Z state. This signal is used for the following modes: • 68000 + Wait I/O Access • SH-3 I/O Access • M16C/62 I/O Access In Serial MCIF Mode, this pin is used for the Serial Read Request (SMCIF_RREQZ.)
MCIF_WEZ	97	I	MCIF Write Enable. Default active low. This input pin indicates if the system CPU wants to perform a MCIF write access. This signal is used for the following modes: • SH-3 I/O Access • M16C/62 I/O Access • Memory Access This signal should be tied high if not used.
Universal Asynchronous Receiver Transmitter Pins			
UART_RxD	86	I	UART receive port. Data from the system is input to the UART buffer using this pin.
UART_TxD	85	O	UART transmit port. Data from the UART buffer is output to the system using this pin.

Pin Name	Pin No.	I/O	Description
Joint Test Action Group (JTAG) & ARM Pins			
JTAG_TCK	80	I	JTAG Clock pin. Both the boundary scan and ARM JTAG uses this input for the JTAG clock.
JTAG_TDI	78	I	JTAG Test Data Input pin
JTAG_TDO	79	O	JTAG Test Data Output pin
JTAG_TMS	77	I	JTAG Test Mode Selector pin.
JTAG_TRST	81	I	JTAG Reset Pin. Both the boundary scan and ARM JTAG uses this input for the JTAG clock.
ARM_JTAG_TDI	83	I	ARM JTAG Test Data Input pin
ARM_JTAG_TDO	84	O	ARM JTAG Test Data Output pin
ARM_JTAG_TMS	82	I	ARM JTAG Test Mode Selector pin
I^2C Serial Bus Pins			
SCL	68	I/O	I^2C Clock Pin. This pin should be tied to ground if no EEPOM is used. For EEPROM write operations, the GPIO8 settings are muxed with the SCL pin. Software can manipulate the GPIO8 register settings in order to perform a write.
SDA	67	I/O	I^2C Data Pin For EEPROM write operations, the GPIO9 settings are muxed with the SDA pin. Software can manipulate the GPIO9 register settings in order to perform a write.
General Purpose Input/Out Pins (GPIO)			
GPIO0	65	I/O	GPIO0. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO1	66	I/O	GPIO1. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO2	15	I/O	GPIO2. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO3	16	I/O	GPIO3. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO4	17	I/O	GPIO 4. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO5	18	I/O	GPIO 5. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO6	69	I/O	GPIO6. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO7	70	I/O	GPIO7. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.

Pin Name		I/O	Description
GPIO8	71	I/O	GPIO8. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO9	72	I/O	GPIO9. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
GPIO10	87	I/O	GPIO10. Can be programmed as general-purpose input, general-purpose output, or specific function. Power-up default is input.
Physical Layer Pins			
TPA0_N TPA1_N TPA2_N TPA0_P TPA1_P TPA2_P	29 36 42 30 37 43	I/O	Twisted Pair A Differential Signal Terminals. For an unused port, TPAN and TPAP signals can be left open.
TPB0_N TPB1_N TPB2_N TPB0_P TPB1_P TPB2_P	25 33 39 26 34 40	I/O	Twisted Pair B Differential Signal Terminals. For an unused port, TPBN and TPBP signals can be left open.
TPBIAS0 TPBIAS1 TPBIAS2	31 38 44	I/O	Twisted Pair Bias Output. These signals provide the 1.86V nominal bias voltage needed for proper operation of the twisted pair driver and receivers for signaling an ìactive connectionî to a remote node. For an unused port, TPBIAS can be left unconnected.
R1 R0	46 47	-	Current Setting Resistors. These pins are connected to external resistors to set the internal operating currents and cable driver output currents. A resistance of 6.34kΩ ± 1% is required to meet the IEEE 1394-1995 output voltage limits.
FILTER0 FILTER1	49 50	I/O	PLL Filter Terminals. These terminals are connected to an external capacitor to form a lag-lead filter required for stable operation of the internal frequency-multiplier PLL, which is using the crystal oscillator. A 0.1 μF± 10% capacitor is the only external component required to complete this filter.
XI X0	52 53	-	Crystal Oscillator Inputs. These terminals connect to a 24.576 MHz parallel resonant fundamental mode crystal. The optimum values for the external shunt capacitors are dependent on the crystal used.
CPS	21	I	Cable Power Status. Input to iceLynx-Micro used to detect if cable power is present. This pin should be connected to the cable power through 390 kΩ resistor.
MSPCTL	19	I	
LINKON	61	O	Link On output. This signal is asserted whenever LPS is low and a Link On packet is received from the 1394 bus.
High Speed Data Interface (HSDI) Port 0 Pins			
HSDI_60958_IN	173	I	60958 Data Input.

Pin Name	Pin No	I/O	Description
HSDI_60958_OUT	179	O	60958 Data Output This signal is also used as FLWCTRL_DVALID in Flow Control Data Valid mode.
HSDI0_60958_IN	136	I	60958 Data Input.
HSDI0_AMCLK_IN	137	I	Audio Master Clock Input. This clock is used to decode the bi-phase encoding of 60958 data. This pin is also used to input the 1.5*BCLK for Flow Control mode.
HSDI0_AV	140	O	HSDI Port 0 Available. Programmable. Default active low. For receive from 1394, this signal indicates if a 1394 packet is available in the receive buffer for reading. The HSDI_AV signal for MPEG2 data also depends on time stamp based release. For transmit onto 1394, this signal can be used to indicate buffer level in HSDI TX mode 8 and 9 by programming a CFR. If the buffer level is above a programmed level, HSDI_AV will be asserted.
HSDI0_CLK	138	I	HSDI Port 0 Clock. Programmable. Default rising edge sample. This clock is used to operate the HSDI port 0 logic. In parallel mode, the maximum clock is 27MHz. In serial mode, the maximum clock is 70MHz. This signal is output to HSDI1_CLK in pass thru mode. This signal can be used as HSDI0_MLPCM_BCLK for DVD-Audio Transmit.
HSDI0_D0	143	I/O	HSDI Port 0 Data 0 Pin. Data 0 is the least significant bit on the HSDI data bus. In serial mode, only HSDI0_D0 is used. This signal is output to HSDI1_D0 in pass thru mode. This signal can be used as HSDI0_MLPCM_D0 for DVD-Audio Transmit.
HSDI0_D1	144	I/O	HSDI Port 0 Data 1 Pin This signal is output to HSDI1_D1 in pass thru mode. This signal can be used as HSDI0_MLPCM_D1 for DVD-Audio Transmit.
HSDI0_D2	147	I/O	HSDI Port 0 Data 2 Pin This signal is output to HSDI1_D2 in pass thru mode. This signal can be used as HSDI0_MLPCM_D2 for DVD-Audio Transmit.
HSDI0_D3	148	I/O	HSDI Port 0 Data 3 Pin This signal is output to HSDI1_D3 in pass thru mode. This signal can be used as HSDI0_MLPCM_A for DVD-Audio Transmit.
HSDI0_D4	149	I/O	HSDI Port 0 Data 4 Pin This signal is output to HSDI1_D4 in pass thru mode

Pin Name	Pin No	I/O	Description
HSDI0_D5	150	I/O	HSDI Port 0 Data 5 Pin This signal is output to HSDI1_D5 in pass thru mode
HSDI0_D6	151	I/O	HSDI Port 0 Data 6 Pin This signal is output to HSDI1_D6 in pass thru mode
HSDI0_D7	152	I/O	HSDI Port 0 Data 7 Pin. Data 0 is the most significant bit on the HSDI data bus. This signal is output to HSDI1_D7 in pass thru mode
HSDI0_DVALID	142	I/O	HSDI Port 0 Data Valid Pin. Programmable. Default active high. This pin indicates if data on the HSDI data bus valid for reading or writing. For transmit onto 1394, this signal is provided by the system with the data. For receive from 1394, iceLynx-Micro provides this signal with the data. For HSDI DV modes, this signal is used as HSDI0_FrameSync indicating DV frame boundary. This signal is output to HSDI1_DVALID in pass thru mode If not used in transmit mode, this signal can be tied low.
HSDI0_EN	139	I	HSDI Port 0 Enable. Programmable. Default active low. Input by the system to enable the HSDI for both transmit and receive from 1394. If not used, this signal can be tied enabled (low or high depending on the polarity set). The application can use HSDI_DVALID or HSDI_SYNC to validate the HSDI data. This signal can be used as HSDI0_MLPCM_LRCLK for DVD-Audio Transmit.
HSDI0_SYNC	141	I/O	HSDI Port 0 Sync Signal. Programmable. Default active high. This signal is used to indicate the start of packet. For transmit onto 1394, this signal is provided by the system with the data. For receive from 1394, iceLynx-Micro provides this signal with the data. This signal is output to HSDI1_SYNC in pass thru mode. If not used in transmit mode, this signal can be tied low or high depending on the polarity.
High Speed Data Interface (HSDI) Port 1 Pins			

Pin Name	Pin No	I/O	Description
HSDI1_AMCLK_IN	169	I	Audio Master Clock Input. This clock is used to decode the bi-phase encoding of 60958 data. This pin is also used to input the 1.5*BCK for Flow Control mode. MLPCM Interface, HSDI1 Audio Port, and HSDI1 video port share buffer 1. Only one interface can access the buffer at a time.
HSDI1_AMCLK_OUT	170	O	Audio Master Clock Output. This clock is derived from the VCO_CLK input. 60958 data output from iceLynx-Micro is bi-phase encoded using this clock.
HSDI1_AUDIO_ERR	171	O	Audio Error Signal. iceLynx-Micro asserts this signal whenever an Audio Error condition occurs. (Receive from 1394 only.)
HSDI1_AUDIO_MUTE	172	O	Audio Mute Status. iceLynx-Micro asserts this signal whenever an Audio Mute condition has occurred, and hardware has muted the HSDI1 audio interface. (Receive from 1394 only.)
HSDI1_AV	155	O	HSDI Port 1 Available. Programmable. Default active low. For receive from 1394, this signal indicates if a 1394 packet is available in the receive buffer for reading. The HSDI_AV signal for MPEG2 data also depends on time stamp based release. For transmit onto 1394, this signal can be used to indicate buffer level in HSDI TX mode 8 and 9 by programming a CFR. This pin can be used to indicate buffer level in transmit mode by programming a CFR. If the buffer level is above a programmed level, HSDI_AV is asserted.
HSDI1_CLK	153	I/O	HSDI Port 1 Clock. Programmable. Default rising edge sample. This clock is used to operate the HSDI port 1 logic. In parallel mode, the maximum clock is 27MHz. In serial mode, the maximum clock is 70MHz. This signal can be used as HSDI1_SACD_MCLK for SACD Transmit and Receive. MLPCM Interface, HSDI1 Audio Port, and HSDI1 video port share buffer 1. Only one interface can access the buffer at a time.
HSDI1_D0	158	I/O	HSDI Port 1 Data 0 Pin. Data 0 is the least significant bit on the HSDI data bus. In serial mode, only HSDI0_D0 is used. This signal can be used as HSDI1_SACD_D0 for SACD Transmit and Receive.

Pin Name	Pin No	I/O	Description
HSDI1_D1	159	I/O	HSDI Port 1 Data 1 Pin This signal can be used as HSDI1_SACD_D1 for SACD Transmit and Receive.
HSDI1_D2	163	I/O	HSDI Port 1 Data 2 Pin This signal can be used as HSDI1_SACD_D2 for SACD Transmit and Receive.
HSDI1_D3	164	I/O	HSDI Port 1 Data 3 Pin This signal can be used as HSDI1_SACD_D3 for SACD Transmit and Receive.
HSDI1_D4	165	I/O	HSDI Port 1 Data 4 Pin This signal can be used as HSDI1_SACD_D4 for SACD Transmit and Receive.
HSDI1_D5	166	I/O	HSDI Port 1 Data 5 Pin This signal can be used as HSDI1_SACD_D5 for SACD Transmit and Receive.
HSDI1_D6	167	I/O	HSDI Port 1 Data 6 Pin This signal can be used as HSDI1_SACD_A for SACD Transmit and Receive.
HSDI1_D7	168	I/O	HSDI Port 1 Data 7 Pin. Data 0 is the most significant bit on the HSDI data bus.
HSDI1_DVALID	157	I/O	HSDI Port 1 Data Valid Pin. Programmable. Default active high. This pin indicates if data on the HSDI data bus valid for reading or writing. For transmit onto 1394, this signal is provided by the system with the data. For receive from 1394, iceLynx-Micro provides this signal with the data. For HSDI DV modes, this signal is used as HSDI0_FrameSync indicating DV frame boundary. If not used in transmit mode, this signal can be tied low.
HSDI1_EN	154	I	HSDI Port 1 Enable. Programmable. Default active low. Input by the system to enable the HSDI for both transmit and receive from 1394. If not used, this signal can be tied enabled (low or high depending on the polarity set). The application can use HSDI_DVALID or HSDI_SYNC to validate the HSDI data.

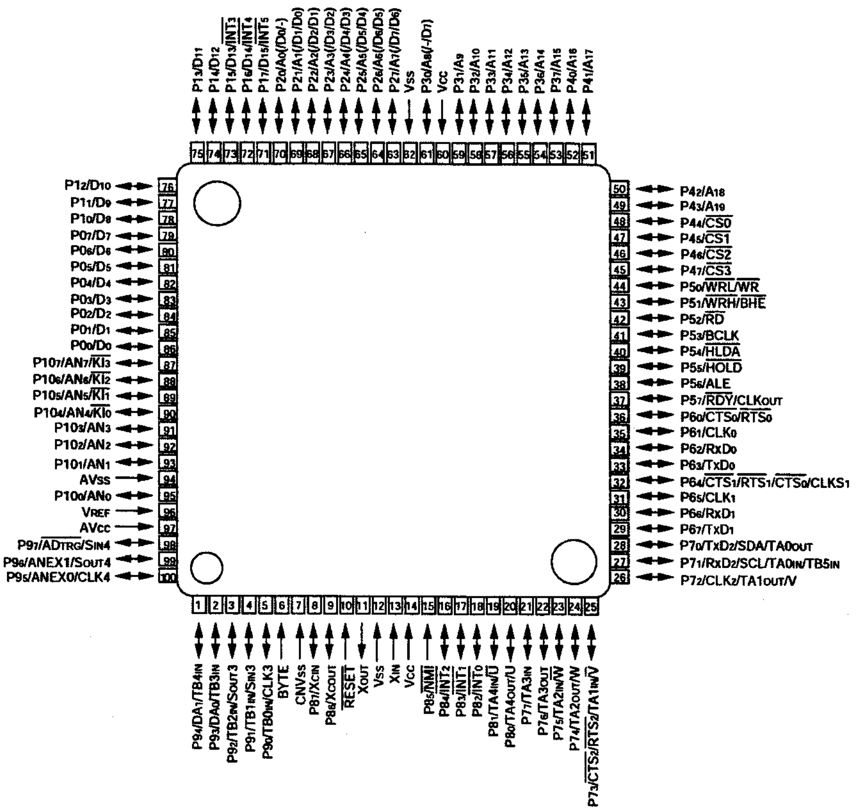
Pin Name	Pin No	I/O	Description
HSDI1_SYNC	156	I/O	HSDI Port 1 Sync Signal. Programmable. Default active high. This signal is used to indicate the start of packet For transmit onto 1394, this signal is provided by the system with the data. For receive from 1394, iceLynx-Micro provides this signal with the data. If not used in transmit mode, this signal can be tied low or high depending on the polarity. This signal can be used as HSDI1_SACD_FRAME for SACD Transmit and Receive.
DVD-Audio Interface Pins			
MLPCM_A	14	I/O	Audio MLPCM Interface Ancillary Data. Ancillary data is input/output using this pin. For DVD-Audio, MLPCM_LRCLK determines if Ancillary Left or Ancillary Right data is present. This signal also functions as FLWCTL_A in Flow Control mode
MLPCM_BCLK	9	I/O	Audio MLPCM Interface Bit Clock. Multiple functions: • DVD Audio BCK (I) • DVD Audio BCK (O) • Flow Control BCK (I/O) MLPCM Interface, HSDI1 Audio Port, and HSDI1 video port share buffer 1. Only one interface can access the buffer at a time.
MLPCM_D0	11	I/O	Audio MLPCM Interface D0. Contains Channel 1 and Channel 2 information. MLPCM_LRCLK determines which channel is present. This signal also functions as FLWCTL_D0 in Flow Control mode.
MLPCM_D1	12	I/O	Audio MLPCM Interface D1. Contains Channel 3 and Channel 4 information. MLPCM_LRCLK determines which channel is present. This signal also functions as FLWCTL_D0 in Flow Control mode
MLPCM_D2	13	I/O	Audio MLPCM Interface D2. Contains Channel 5 and Channel 6 information. MLPCM_LRCLK determines which channel is present. This signal also functions as FLWCTL_D0 in Flow Control mode
MLPCM_LRCLK	10	I/O	Audio MLPCM Interface Left-Right Clock. Multiple functions: DVD Audio LRCLK (I) DVD Audio LRCLK (O) Flow Control LRCLK (I/O)

Pin Name	Pin No	I/O	Description
Phase Lock Loops Pins			
DIV_VCO	7	O	Output for External Phase Detector. This signal is the divided VCO_CLK. It used by the external phase detector to compare with the REF_SYT signal. The divide ratios are setup in CFR.
PFD	8	O	Output from Internal Phase Detector. This signal can feed directly into the LPF and VCO if the internal phase detector is used.
REF_SYT	6	O	Output for External Phase Detector. This signal represents the SYT match for received audio or DV packets. The phase detector uses it as input to detect differences between the SYT match and the VCO clock.
VCO_CLK	5	I	Input from VCO. This is used to generate internal audio and DV clocks for receive clock recovery. Audio Frequency: 33.868MHz or 36.864MHz. DV Frequency: 30.72MHz
Test Mode Pins			
TEST_MODE0	2	I/O	Test Mode. Used for Internal TI testing. Should be tied low for normal operation.
TEST_MODE1	3	I/O	Test Mode. Used for Internal TI testing. Should be tied low for normal operation.
TEST_MODE2 TEST_MODE3	57 58	I/O	Test Mode. Used for Internal TI testing. Should be tied low for normal operation.

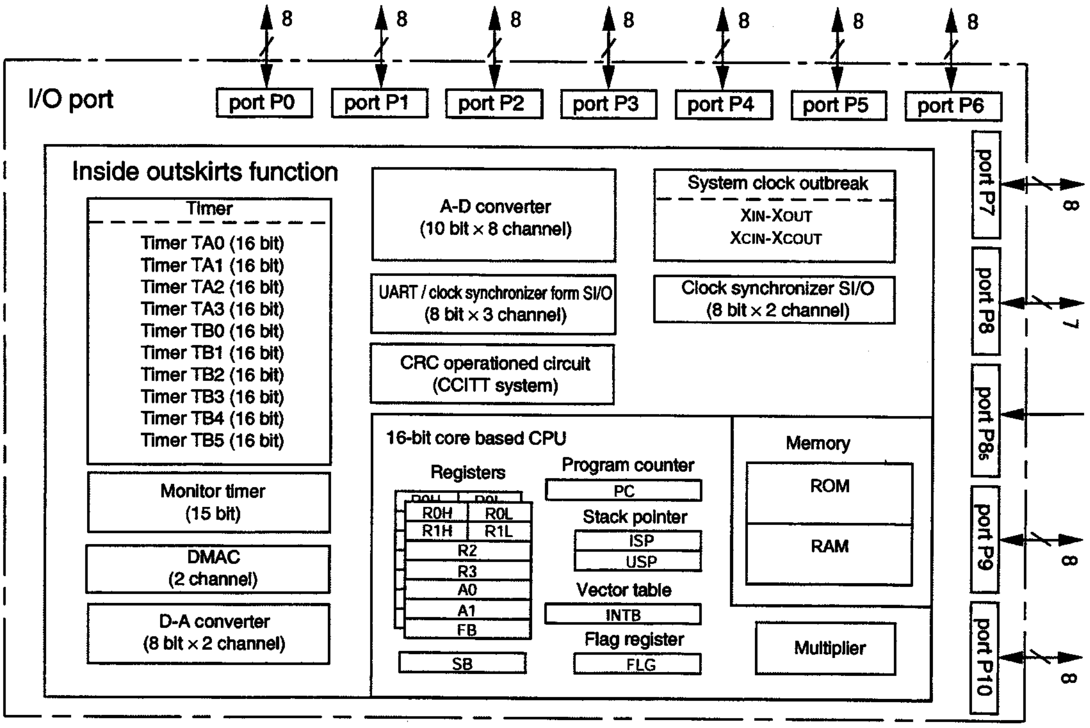
■ PD5787A (ILKB ASSY : IC101)

• HOST CPU

● Pin Arrangement


P13/D11
P14/D12
P15/D13/INT3
P16/D14/INT4
P17/D15/INT5
P20/A0(D0/-)
P21/A1(D1/D0)
P22/A2(D2/D1)
P23/A3(D3/D2)
P24/A4(D4/D3)
P25/A5(D5/D4)
P26/A6(D6/D5)
P27/A7(D7/D6)
Vss
P30/A8(-/D7)
Vcc
P31/A9
P32/A10
P33/A11
P34/A12
P35/A13
P36/A14
P37/A15
P40/A16
P41/A17
P12/D10
P11/D9
P10/D8
P07/D7
P06/D6
P05/D5
P04/D4
P03/D3
P02/D2
P01/D1
P00/D0
P107/AN7/KI3
P106/AN6/KI2
P105/AN5/KI1
P104/AN4/KI0
P103/AN3
P102/AN2
P101/AN1
AVss
P100/AN0
VREF
AVcc
P97/ADTRG/SIN4
P96/ANEX1/SOUT4
P95/ANEX0/CLK4
P42/A18
P43/A19
P44/CS0
P45/CS1
P46/CS2
P47/CS3
P50/WRL/WR
P51/WRH/BHE
P52/RD
P53/BCLK
P54/HLDA
P55/HOLD
P56/ALE
P57/RDY/CLKOUT
P60/CTS0/RTS0
P61/CLK0
P62/RxD0
P63/TxD0
P64/CTS1/RTS1/CTS0/CLKS1
P65/CLK1
P66/RxD1
P67/TxD1
P70/TxD2/SDA/TA0OUT
P71/RxD2/SCL/TA0IN/TB5IN
P72/CLK2/TA1OUT/V
P94/DA1/TB4IN
P93/DA0/TB3IN
P92/TB2IN/SOUT3
P91/TB1IN/SIN3
P90/TB0IN/CLK3
BYTE
CNVss
P87/XCIN
P86/XCOUT
RESET
XOUT
Vss
XIN
Vcc
P85/NMI
P84/INT2
P83/INT1
P82/INT0
P81/TA4IN/U
P80/TA4OUT/U
P77/TA3IN
P76/TA3OUT
P75/TA2IN/W
P74/TA2OUT/W
P73/CTS2/RTS2/TA1IN/V
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

● Block Diagram


8
I/O port
port P0
port P1
port P2
port P3
port P4
port P5
port P6
port P7
port P8
port P85
port P9
port P10
7
Inside outskirts function
Timer
Timer TA0 (16 bit)
Timer TA1 (16 bit)
Timer TA2 (16 bit)
Timer TA3 (16 bit)
Timer TB0 (16 bit)
Timer TB1 (16 bit)
Timer TB2 (16 bit)
Timer TB3 (16 bit)
Timer TB4 (16 bit)
Timer TB5 (16 bit)
Monitor timer (15 bit)
DMAC (2 channel)
D-A converter (8 bit × 2 channel)
A-D converter (10 bit × 8 channel)
UART / clock synchronizer form SI/O (8 bit × 3 channel)
CRC operationed circuit (CCITT system)
System clock outbreak
XIN-XOUT
XCIN-XCOUT
Clock synchronizer SI/O (8 bit × 2 channel)
16-bit core based CPU
Registers
R0H R0L
R1H R1L
R2
R3
A0
A1
FB
SB
Program counter
PC
Stack pointer
ISP
USP
Vector table
INTB
Flag register
FLG
Memory
ROM
RAM
Multiplier

7.3 DISC / CONTENT FORMAT PLAYBACK COMPATIBILITY

Disc / Content Format Playback Compatibility

General Disc Compatibility

- This player was designed and engineered to be compatible with software bearing one or more of the following logos.

DVD-Audio DVD-Video DVD-R DVD-RW

Audio CD Video CD CD-R CD-RW

Super VCD*1 Super Audio CD

*1 *DV-S755Ai only*

- Other formats, including but not limited to the following, are not playable in this player:

  Photo CD, DVD-RAM, DVD-ROM, CD-ROM

- DVD-R/RW and CD-R/RW discs (Audio CDs and Video CDs) recorded using a DVD recorder, CD recorder or personal computer may not be playable on this machine. This may be caused by a number of possibilities, including but not limited to: the type of disc used; the type of recording; damage, dirt or condensation on either the disc or the player s pick-up lens. See below for notes about particular software and formats.

CD-R/RW Compatibility

- This unit will play CD-R and CD-RW discs recorded in CD Audio or Video CD format, or as a CD-ROM containing MP3 audio files. However, any other content may cause the disc not to play, or create noise/distortion in the output.
- This unit cannot record CD-R or CD-RW discs.
- Unfinalized CD-R/RW discs recorded as CD Audio can be played, but the full Table of Contents (playing time, etc.) will not be displayed.

DVD-R/RW Compatibility

- This unit will play DVD-R/RW discs that were recorded using the DVD Video format or Video Recording format.
- This unit cannot record DVD-R/RW discs.
- Unfinalized DVD-R/RW discs cannot be played in this player.

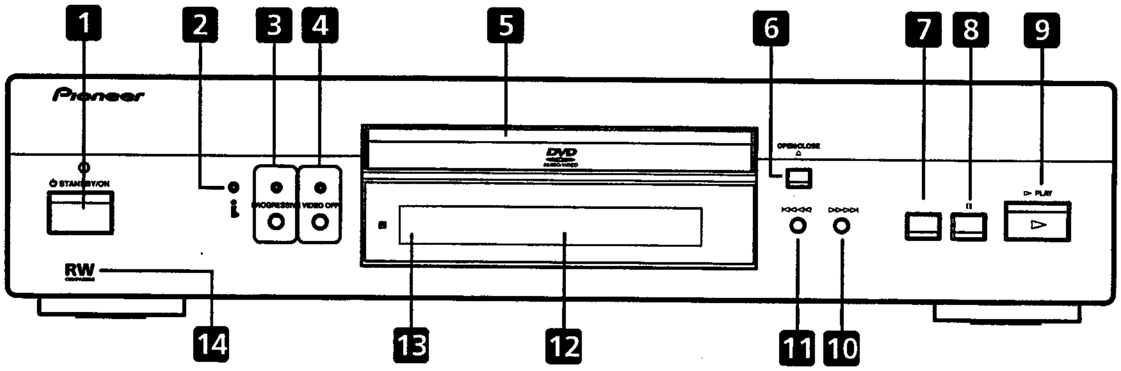
7.4 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	**Cleaning tools**
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. PANEL FACILITIES

Front panel



1 ⏻ STANDBY/ON
Press to switch the player on or off (the player can be put into standby using the remote control; the standby indicator above the button lights when in standby)

2 i.LINK indicator
Lights when audio is being sent over the i.LINK interface to a compatible component.

3 PROGRESSIVE button/indicator
Press to switch the progressive video output mode between progressive and interlace. The indicator lights in progressive scan mode.

4 VIDEO OFF button/indicator
Press to switch the video output on/off. The indicator lights when the video output is switched off (when listening to a DVD-Audio disc, for example)

5 Disc tray

6 ⏏ OPEN/CLOSE
Press to open or close the disc tray (when in standby, this button will also switch the power on)

7 ■ (stop)
Press to stop the disc (you can resume playback by pressing ► (play))

8 ❚❚ (pause)
Press to pause playback. Press again to restart

9 ► (play)
Press to start or resume playback (when in standby, this button will also switch the power on)

10 ►► ►►| (forward scan/skip)

- Press and hold for fast forward scanning
- Press to jump to the next chapter or track

11 |◄◄ ◄◄ (reverse scan/skip)

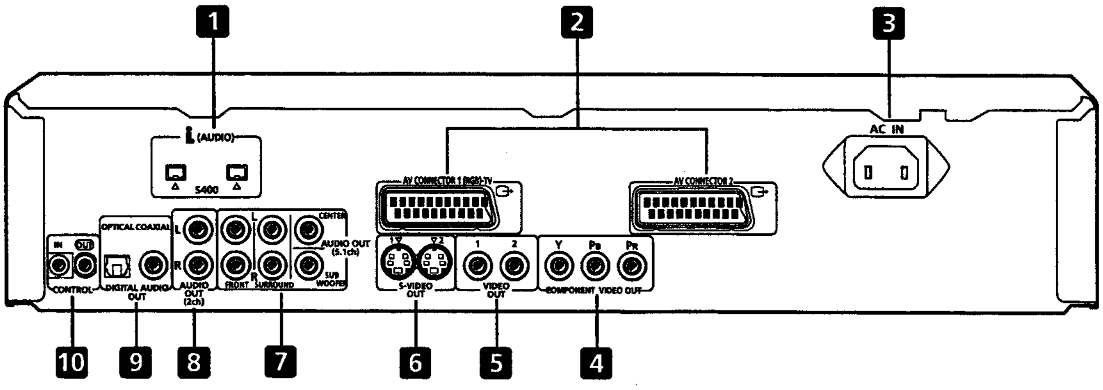
- Press and hold for fast reverse scanning
- Press to jump back to the beginning of the current chapter or track, then to previous chapters/tracks

12 Display

13 Remote control sensor
The remote control has a range of up to about 7m.

14 RW COMPATIBLE
This mark indicates compatibility with DVD-RW discs recorded on a DVD recorder in Video Recording mode.

Rear panel [DV-757Ai/WYXJ]


1
2
3
(AUDIO)
S400
AC IN
AV CONNECTOR 1 (RGB)-TV
AV CONNECTOR 2
IN
OUT
OPTICAL
COAXIAL
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R
CENTER
AUDIO OUT (5.1ch)
SUB WOOFER
FRONT
SURROUND
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PB
PR
CONTROL
DIGITAL AUDIO OUT
AUDIO OUT (2ch)
S-VIDEO OUT
VIDEO OUT
COMPONENT VIDEO OUT
10
9
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4

When connecting this player up to your TV, AV receiver or other components, make sure that all components are switched off and unplugged.

1 i (AUDIO) – i.LINK connectors

4-pin, S400 i.LINK connectors for connection to i.LINK-equipped receivers and other components. Each i.LINK connector acts simultaneously as both input and output.

2 AV CONNECTOR

AV CONNECTOR 1 (RGB)-TV

Use a 21-pin SCART cable to connect to a TV or monitor compatible with this type of connection. Both audio (2 channel stereo) and video (Video, S-video, and RGB) signals are output from the **AV CONNECTOR 1 (RGB)-TV**.

AV CONNECTOR 2

Use a 21-pin SCART cable to connect to a VCR.

3 AC IN

Connect the supplied power cord here, then plug into a power outlet.

4 COMPONENT VIDEO OUT

High quality video output for connection to a TV, monitor or AV receiver that has component video inputs.

Connect using a commercially available three-way component video cable.

Be careful to match the colors of the jacks and cables for correct connection.

5 VIDEO OUT (1&2)

Standard video output(s) that you can connect to your TV or AV receiver using the supplied audio/video cable.

6 S-VIDEO OUT (1&2)

S-Video output(s) that you can use instead of the **VIDEO OUT** jacks.

7 AUDIO OUT (5.1ch)

Multichannel analog audio outputs for connection to an AV receiver with multichannel inputs.

8 AUDIO OUT (2ch)

Two channel analog audio outputs for connection to your TV, AV receiver or stereo system.

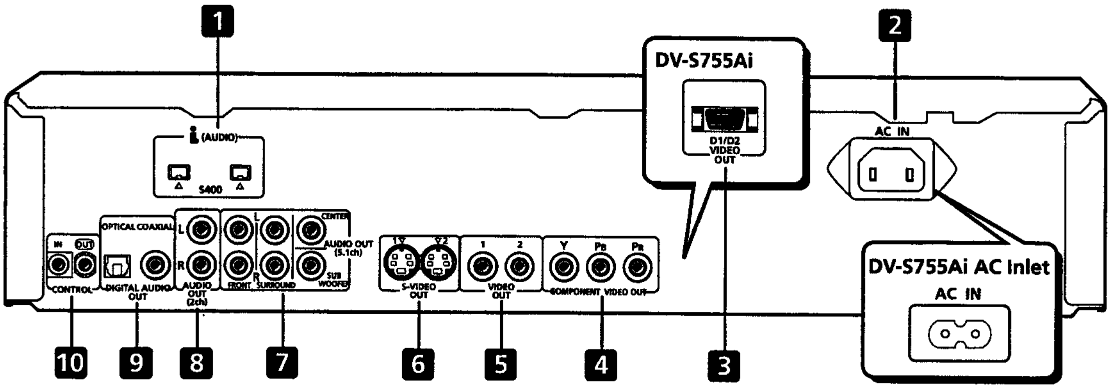
9 DIGITAL AUDIO OUT – OPTICAL / COAXIAL

Digital audio outputs for connection to a PCM, Dolby Digital, DTS and/or MPEG-compatible AV receiver.

10 CONTROL IN / OUT

For passing remote control signals to other Pioneer components.

Rear panel [DV-S755Ai/RLXJ/NC]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2
DV-S755Ai
D1/D2 VIDEO OUT
AC IN
(AUDIO)
S400
IN OUT
CONTROL
OPTICAL COAXIAL
DIGITAL AUDIO OUT
L
R
AUDIO OUT (2ch)
CENTER
AUDIO OUT (5.1ch)
SUB WOOFER
FRONT
SURROUND
1 2
S-VIDEO OUT
VIDEO OUT
Y PB PR
COMPONENT VIDEO OUT
DV-S755Ai AC Inlet
AC IN
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3

DV-47Ai

When connecting this player up to your TV, AV receiver or other components, make sure that all components are switched off and unplugged.

1 i (AUDIO) – i.LINK connectors

4-pin, S400 i.LINK connectors for connection to i.LINK-equipped receivers and other components. Each i.LINK connector acts simultaneously as both input and output.

2 AC IN

Connect the supplied power cord here, then plug into a power outlet.

3 D1/D2 VIDEO OUT (DV-S755Ai only)

Use to connect this player to a TV with a D video input.

4 COMPONENT VIDEO OUT

High quality video output for connection to a TV, monitor or AV receiver that has component video inputs.

Connect using a commercially available three-way component video cable. Be careful to match the colors of the jacks and cables for correct connection.

5 VIDEO OUT (1&2)

Standard video output(s) that you can connect to your TV or AV receiver using the supplied audio/video cable.

6 S-VIDEO OUT (1&2)

S-Video output(s) that you can use instead of the **VIDEO OUT** jacks.

7 AUDIO OUT (5.1ch)

Multichannel analog audio outputs for connection to an AV receiver with multichannel inputs.

8 AUDIO OUT (2ch)

Two channel analog audio outputs for connection to your TV, AV receiver or stereo system.

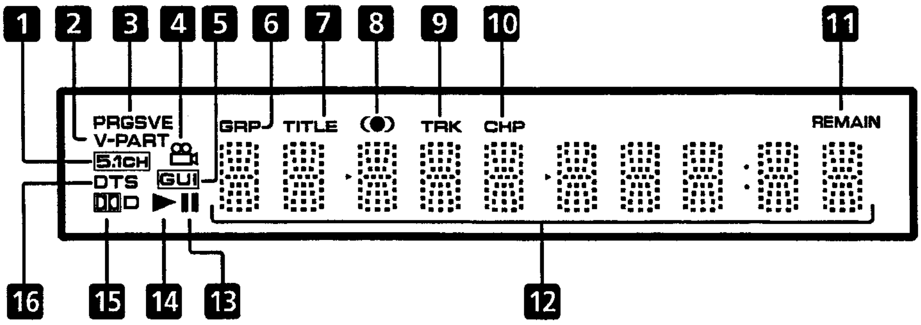
9 DIGITAL AUDIO OUT – OPTICAL / COAXIAL

Digital audio outputs for connection to a PCM, Dolby Digital, DTS and/or MPEG-compatible AV receiver.

10 CONTROL IN / OUT

For passing remote control signals to other Pioneer components.

Display



1 5.1CH
Lights when analog 5.1 channel output is selected

2 V-PART
Lights when playing a video part of a DVD disc

3 PRGSVE
Lights when the video output is progressive scan

4 🎥
Lights during multi-angle scenes on a DVD disc

5 GUI (Graphical User Interface)
Lights when a menu is displayed on-screen

6 GRP
Indicates that the character display is showing a DVD-Audio group number

7 TITLE
Indicates that the character display is showing a DVD-Video title number

8 (●)
Lights when ▯▯V/TruSurround is active

9 TRK
Indicates that the character display is showing a track number

10 CHP
Indicates that the character display is showing a DVD chapter number

11 REMAIN
Lights when the character display is showing the time or number of tracks/titles/chapters remaining

12 Character display

13 II
Lights when a disc is paused

14 ►
Lights when a disc is playing

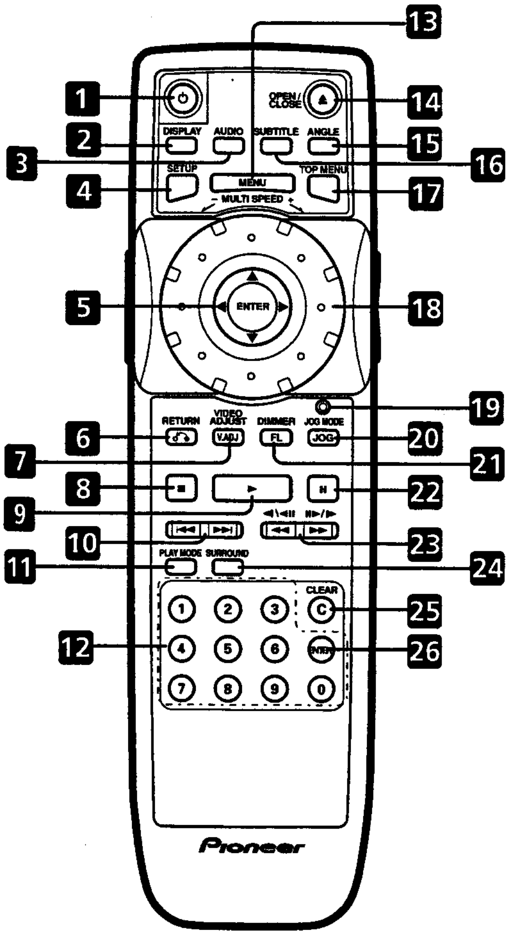
15 ▯▯D
Lights when a Dolby Digital soundtrack is playing

16 DTS
Lights when a DTS soundtrack is playing

Remote control

Tip

- Press the button on the right side of the remote to illuminate buttons **6** to **9** and **20** to **22**.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OPEN/CLOSE
DISPLAY
AUDIO
SUBTITLE
ANGLE
SETUP
MENU
TOP MENU
MULTI SPEED
ENTER
RETURN
VIDEO ADJUST
DIMMER
JOG MODE
V.ADJ
FL
JOG
PLAY MODE
SURROUND
CLEAR
C
1
2
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9
0
ENTER
Pioneer

1 ⏻ (STANDBY/ON)
Press to switch the player on or into standby

2 DISPLAY
Press to display information about the disc playing

3 AUDIO
Press to select the audio channel or language

4 SETUP
Press to display (or exit) the on-screen display

5 ENTER & Joystick
Use to navigate on-screen displays and menus. Press **ENTER** to select an option or execute a command

6 ↶ (RETURN)
Press to return to a previous menu screen

7 V.ADJ (VIDEO ADJUST)
Press to display the Video Adjust menu

8 ■
Press to stop the disc (you can resume playback by pressing ► (play))

9 ►
Press to start or resume playback

10 ⏮ ⏭
Press to jump to the start of the previous / next chapter / track

11 PLAY MODE
Press to display the Play Mode menu (You can also get to the Play Mode menu by pressing **SETUP** and selecting **Play Mode**)

12 Number buttons

13 MENU
Press to display a DVD disc menu, or the Disc Navigator if a DVD-RW, CD, Video CD or MP3 disc is loaded

14 ⏏ OPEN/CLOSE
Press to open or close the disc tray

15 ANGLE
Press to change the camera angle during DVD multi-angle scene playback

16 SUBTITLE
Press to select a subtitle display

17 TOP MENU
Press to display the top menu of a DVD disc

18 MULTI DIAL
Use for scanning and slow motion control

19 Jog indicator
Lights when multi dial is in jog mode

20 JOG (JOG MODE)
Press to put switch jog mode on/off. When on, use the **MULTI DIAL** to advance or reverse frames

21 FL (DIMMER)
Press to change the display brightness

22 II
Press to pause playback; press again to restart

23 ◀◀ and ◀I/◀II / ▶▶ and II▶/I▶
Use for reverse / forward slow motion playback, frame reverse / advance and reverse / forward scanning.

24 SURROUND
Press to activate/switch off DDV/TruSurround

25 CLEAR
Press to clear a numeric entry

26 ENTER
Press to select an option or execute a command